TABLE 3 (continued)

Summary of Major Anion Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[1]	Bicarbonate (mg/L)	Carbonate (mg/L)	Nitrate as N[3] (mg/L)	Nitrite as N[3] (mg/L)	Sulfate[3] (mg/L)	Chloride[3] (mg/L)
OW-3	12/16/02	7.08	15.3	>4000	1100	<1	<1.8	<1.7	8400	3800
(Cont.)	6/30/03	7.13	14.6	>4000	NS	NS	2.0J	<2.5	6100	3800
	12/30/03	7.27	13.4	>4000	1200	<1.2	0.24	<0.099	6300	1200
	6/30/04	6.89	12.4	>4000	920	<1.2	0.20	<0.025	5400	4900
	12/29/04	6.65	12.3	>4000	1100	<3.4	<0.07	<0.07	6700	3200
	6/30/05	6.90	12.5	>4000	1100	<1.2	<0.28	<0.25	8000	3800
	12/28/05	7.12	15.2	>4000	1100	<1.2	6.2	11.000	6800	3800
	6/29/06	6.54	13.5	>4000	1100	<1.2	2.7	<0.25	680	4800
	1/25/07	7.47	12.7	>4000	1100	<5.0	<1.4	<1.9	5900	4750
	7/2/07	6.9	13.7	>4000	NA	NA	NA	NA	NA	NA
	1/31/08	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/24/08	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/05/09	7.05	14.0	>4000	1200	<5.0	4.3	1.900	6100	4390
	6/29/09	7.15	14.1	>4000	919	<5.0	7.4	<6.1	5010	4970
	12/15/09	7.17	13.0	>4000	920	<5.0	6.2	<1.5	4740	5050
	6/23/10	7.35	12.3	>4000	960	<5.0	8.0	<6.1	5960	3920
	12/13/10	7.05	13.2	>4000	960	<5.0	9.5	<15.0	5960	4690
	6/21/11	7.19	12.3	>4000	973	<5.0	4.0	<15.0	5100	3490
	12/21/11	7.20	12.0	>4000	988	<5.0	4.1	<6.1	5620	3650
	6/19/12	7.40	13.3	>4000	959	<5.0	8.8	<2.5	5690	3560
	12/17/12	7.33	13.5	>4000	1030	<5.0	0.57	0.210	5810	3440
	6/13/13	7.20	12.3	>4000	973	<5.0	11.2	1.100	5820	3490
	12/12/13	7.03	13.3	>4000	908	<5.0	0.7	0.090	4550	2770
	6/23/14	7.19	12.4	>4000	919	<5.0	9.6	2.900	4990	2960
	12/9/14	7.07	12.2	>4000	994	<5.0	9.8	<.20	5520	3860
	5/28/15	7.10	12.3	>4000	950	<5.0	0.41	<.80	4250	2560
	11/16/15	7.11	12.4	>4000	885	<5.0	0.95	<2.0	3970	2200
	5/23/16	7.08	12.2	>4000	960	<1.0	7.5	<2.0	2800	2160
	11/15/16	7.11	12.4	>4000	860	<1.0	<2.0	<2.0	4200	2160
OW-4	12/15/09	7.14	12.9	>4000	276	<5.0	89.3	<1.5	6450	4350

TABLE 3 (continued)

Summary of Major Anion Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[1]	Bicarbonate (mg/L)	Carbonate (mg/L)	Nitrate as N[3] (mg/L)	Nitrite as N[3] (mg/L)	Sulfate[3] (mg/L)	Chloride[3] (mg/L)
OW-4	6/23/10	7.17	13.5	>4000	257	<5.0	80.2	<6.1	6650	3580
(Cont.)	12/13/10	7.18	13.1	>4000	300	<5.0	69.1	<15.0	7880	3840
	6/21/11	7.23	12.2	>4000	262	<5.0	71.0	<15.0	6880	3690
	12/21/11	7.12	11.7	>4000	322	<5.0	69.9	<6.1	7210	3430
	6/19/12	7.41	14.0	>4000	261	<5.0	87.5	<2.5	6990	3920
	12/17/12	7.33	12.7	>4000	262	<5.0	78.7	<0.08	7390	3780
	6/13/13	7.25	12.3	>4000	248	<5.0	97.0	<0.8	6980	4120
	12/12/13	7.29	12.9	>4000	348	<5.0	49.3	<0.08	7560	2810
	6/23/14	7.21	12.4	>4000	284	<5.0	75.4	<0.20	6920	3270
	12/9/14	7.28	12.4	>4000	306	<5.0	71.3	1.100	7410	3250
	5/28/15	7.28	12.3	>4000	1180	<5.0	2.0	<.40	2070	1000
	11/16/15	7.29	12.3	>4000	844	<5.0	18.6	0.370	5530	1730
	5/23/16	7.27	12.4	>4000	600	<1.0	30.0	<2..0	5700	2040
	11/15/16	7.10	12.8	>4000	760	<1.0	12.0	<2.0	4500	1800

1 Specific conductance in micro-siemens at 25 degrees Celsius.
2 By Method 310.1.
3 By Method 300.
J Analyte was detected above the Reporting Limit but below the Quantitation Limit.

mg/L milligrams per liter.
NS No sample.

ATTACHMENT I

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401
303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 12, 2017

Susana Lara-Mesa
K.P. Kauffman Company, Inc
1675 Broadway, Suite 2800
Denver, CO 80202-4628
RE: Wattenberg Groundwater

Enclosed are the results of analyses for samples received by Summit Scientific on 05/30/17 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OW-1	1705281-01	Water	05/30/17 08:00	05/30/17 14:00
OW-2	1705281-02	Water	05/30/17 10:05	05/30/17 14:00
OW-3	1705281-03	Water	05/30/17 09:00	05/30/17 14:00
OW-4	1705281-04	Water	05/30/17 11:10	05/30/17 14:00

Summit Scientific

S2

1705281

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: K.P. Kauffman Company, Inc
Address: 1675 Broadway, Suite 2800
City/State/Zip: Denver, CO 80202
Phone: 303-825-4822 Fax:
Sampler Name: Mike Hattel

Project Manager: Susana Lara-Mesa
E-Mail: slaramesa@KPK.com
Project Name: Wattenberg Groundwater
Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify) H_2SO_4	Groundwater	Soil	Air-Canister #	Other (Specify)	Oil & Grease 1664	BTEX	Anions (...)	Cations (...)	Alkalinity (Carb & Bicarb)	TOC	TDS		
1	OW-1	5/30/17	0800	7	X			X	X				X	X	X	X	X	X	X		
2	OW-2	↓	1005	7	X			X	X				X	X	X	X	X	X	X		
3	OW-3	↓	0900	7	X			X	X				X	X	X	X	X	X	X		
4	OW-4	↓	1110	7	X			X	X				X	X	X	X	X	X	X		
5																					
6																					
7																					
8																					
9																					
10																					OMIA

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	5/30/17 14:00	[signature]	5-30-17 14:00
[signature]	5-30-17 18:00		

Turn Around Time (Check)
Same Day ___ 72 hours
24 hours ___ Standard X
48 hours ___
Sample Integrity:
Temperature Upon Receipt: 10.5
Intact: (Yes) No

Notes: Full QA/QC Package. Copy of report to Susan & Mike Hattel e. mhattel@msn.com

www.s2scientific.com

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Sample Receipt Checklist

S2 Work Order: 1705281

Client: K.P. Kauffman Client Project ID: Wattenberg Groundwater

Shipped Via: H.D. ice (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

Matrix (check all that apply): ____Air ____Soil/Solid __X__Water ____Other: _____ (Describe)

Cooler ID					
Temp (°C)	10.5				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C [1]? NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			ice in cl
Were all samples received intact [1]?	X			
Was adequate sample volume provided [1]?	X			
If custody seals are present, are they intact [1]?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely [1]?	X			
Does the COC agree with the number and type of sample bottles received [1]?	X			
Do the sample IDs on the bottle labels match the COC [1]?	X			
Is the COC properly relinquished by the client w/ date and time recorded [1]?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		X		
Are samples preserved that require preservation (excluding cooling)[1]? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	X			HCL H2SO4
If samples are acid preserved for metals, is the pH ≤ 2[1]? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			~	
Additional Comments (if any):				

[1] If NO, then contact the client before proceeding with analysis and note in case narrative.

Muri P. — Custodian Printed Name

5-30-17 — Signature or Initials of Custodian

14:30 — Date/Time

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-1
1705281-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1705307	06/03/17	06/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*99.9 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*45-146*		"	"	"	"	

Total Metals by EPA Method 200.8

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**143**	0.0500	mg/L	1	1705303	05/31/17	05/31/17	EPA 200.8	
Magnesium	**149**	0.0500	"	"	"	"	"	"	
Potassium	**6.57**	0.0500	"	"	"	"	"	"	
Sodium	**1370**	0.0500	"	"	"	"	"	"	

Oil and Grease by EPA 1664A (Aqueous)

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Oil & Grease (HEM)	**16.6**	5.00	mg/L	1	1706007	06/01/17	06/05/17	EPA 1664A	

Conventional Chemistry Parameters by APHA/EPA Methods

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-1

1705281-01 (Water)

Summit Scientific

Conventional Chemistry Parameters by APHA/EPA Methods

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Alkalinity	**900**	5.00	mg/L as CaCO3	1	1706020	06/02/17	06/05/17	SM2320-B	
Hydroxide Alkalinity	ND	5.00	"	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	"	"	"	"	"	"	
Bicarbonate Alkalinity	**900**	5.00	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nitrate + Nitrite as N	ND	0.820	mg/L	1	[CALC]	05/31/17	05/31/17	Calculation	
Chloride	**460**	100	"	100	1705312	"	06/08/17	EPA 300.0	
Nitrite as N	ND	0.0200	"	1	"	"	05/31/17	"	
Sulfate	**1020**	100	"	100	"	"	06/08/17	"	
Nitrate as N	ND	0.800	"	1	"	"	05/31/17	"	

Total Dissolved Solids by 160.1

Date Sampled: **05/30/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**5750**	8.00	mg/L	1	1706050	06/05/17	06/05/17	EPA 160.1	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-2
1705281-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1705307	06/03/17	06/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*45-146*		"	"	"	"	

Total Metals by EPA Method 200.8

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**502**	0.0500	mg/L	1	1705303	05/31/17	05/31/17	EPA 200.8	
Magnesium	**561**	0.0500	"	"	"	"	"	"	
Potassium	**13.6**	0.0500	"	"	"	"	"	"	
Sodium	**3550**	0.0500	"	"	"	"	"	"	

Oil and Grease by EPA 1664A (Aqueous)

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Oil & Grease (HEM)	**16.2**	5.00	mg/L	1	1706007	06/01/17	06/05/17	EPA 1664A	

Conventional Chemistry Parameters by APHA/EPA Methods

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-2

1705281-02 (Water)

Summit Scientific

Conventional Chemistry Parameters by APHA/EPA Methods

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Alkalinity	**1150**	5.00	mg/L as CaCO3	1	1706020	06/02/17	06/05/17	SM2320-B	
Carbonate Alkalinity	ND	5.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	"	"	"	"	"	"	
Bicarbonate Alkalinity	**1150**	5.00	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nitrate + Nitrite as N	ND	0.820	mg/L	1	[CALC]	05/31/17	05/31/17	Calculation	
Sulfate	**2840**	100	"	100	1705312	"	06/08/17	EPA 300.0	
Nitrite as N	ND	0.0200	"	1	"	"	05/31/17	"	
Chloride	**1730**	100	"	100	"	"	06/08/17	"	
Nitrate as N	ND	0.800	"	1	"	"	05/31/17	"	

Total Dissolved Solids by 160.1

Date Sampled: **05/30/17 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**17100**	8.00	mg/L	1	1706050	06/05/17	06/05/17	EPA 160.1	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-3
1705281-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1705307	06/03/17	06/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*95.5 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.7 %*	*45-146*		"	"	"	"	

Total Metals by EPA Method 200.8

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**358**	0.0500	mg/L	1	1705303	05/31/17	05/31/17	EPA 200.8	
Magnesium	**426**	0.0500	"	"	"	"	"	"	
Potassium	**14.4**	0.0500	"	"	"	"	"	"	
Sodium	**3260**	0.0500	"	"	"	"	"	"	

Oil and Grease by EPA 1664A (Aqueous)

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Oil & Grease (HEM)	**14.2**	5.00	mg/L	1	1706007	06/01/17	06/05/17	EPA 1664A	

Conventional Chemistry Parameters by APHA/EPA Methods

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-3
1705281-03 (Water)

Summit Scientific

Conventional Chemistry Parameters by APHA/EPA Methods

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Alkalinity	**1060**	5.00	mg/L as CaCO3	1	1706020	06/02/17	06/05/17	SM2320-B	
Hydroxide Alkalinity	ND	5.00	"	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	"	"	"	"	"	"	
Bicarbonate Alkalinity	**1060**	5.00	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nitrate + Nitrite as N	ND	0.820	mg/L	1	[CALC]	05/31/17	05/31/17	Calculation	
Chloride	**821**	100	"	100	1705312	"	06/08/17	EPA 300.0	
Nitrite as N	ND	0.0200	"	1	"	"	05/31/17	"	
Sulfate	**1630**	100	"	100	"	"	06/08/17	"	
Nitrate as N	ND	0.800	"	1	"	"	05/31/17	"	

Total Dissolved Solids by 160.1

Date Sampled: **05/30/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**15500**	8.00	mg/L	1	1706050	06/05/17	06/05/17	EPA 160.1	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

OW-4

1705281-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1705307	06/03/17	06/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.8 %*	*45-146*		"	"	"	"	

Total Metals by EPA Method 200.8

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**326**	0.0500	mg/L	1	1705303	05/31/17	05/31/17	EPA 200.8	
Magnesium	**345**	0.0500	"	"	"	"	"	"	
Potassium	**12.8**	0.0500	"	"	"	"	"	"	
Sodium	**3060**	0.0500	"	"	"	"	"	"	

Oil and Grease by EPA 1664A (Aqueous)

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Oil & Grease (HEM)	**15.4**	5.00	mg/L	1	1706007	06/01/17	06/05/17	EPA 1664A	

Conventional Chemistry Parameters by APHA/EPA Methods

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	Reported: 06/12/17 10:11

OW-4

1705281-04 (Water)

Summit Scientific

Conventional Chemistry Parameters by APHA/EPA Methods

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Alkalinity	**720**	5.00	mg/L as CaCO3	1	1706020	06/02/17	06/05/17	SM2320-B	
Carbonate Alkalinity	ND	5.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	"	"	"	"	"	"	
Bicarbonate Alkalinity	**720**	5.00	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nitrate + Nitrite as N	ND	0.820	mg/L	1	[CALC]	05/31/17	05/31/17	Calculation	
Chloride	**827**	100	"	100	1705312	"	06/08/17	EPA 300.0	
Sulfate	**2670**	100	"	"	"	"	"	"	
Nitrite as N	ND	0.0200	"	1	"	"	05/31/17	"	
Nitrate as N	ND	0.800	"	"	"	"	"	"	

Total Dissolved Solids by 160.1

Date Sampled: **05/30/17 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	**13000**	8.00	mg/L	1	1706050	06/05/17	06/05/17	EPA 160.1	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1705307 - EPA 5030 Water MS										
Blank (1705307-BLK1)				Prepared & Analyzed: 06/01/17						
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	*14.5*		"	*13.3*		*109*	*37-154*			
Surrogate: Toluene-d8	*13.4*		"	*13.3*		*100*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.3*		"	*13.3*		*99.5*	*45-146*			
LCS (1705307-BS1)				Prepared & Analyzed: 06/01/17						
Benzene	31.0	1.0	ug/l	33.3		92.9	51-132			
Toluene	34.0	1.0	"	33.3		102	51-138			
Ethylbenzene	38.6	1.0	"	33.1		117	58-146			
m,p-Xylene	74.2	2.0	"	66.5		112	57-144			
o-Xylene	34.9	1.0	"	32.7		107	53-146			
Surrogate: 1,2-Dichloroethane-d4	*14.0*		"	*13.3*		*105*	*37-154*			
Surrogate: Toluene-d8	*13.2*		"	*13.3*		*99.4*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.6*		"	*13.3*		*102*	*45-146*			
Matrix Spike (1705307-MS1)	**Source: 1705283-01**			Prepared & Analyzed: 06/01/17						
Benzene	32.0	1.0	ug/l	33.3	ND	96.1	34-141			
Toluene	35.1	1.0	"	33.3	ND	105	27-151			
Ethylbenzene	39.6	1.0	"	33.1	ND	120	29-160			
m,p-Xylene	77.5	2.0	"	66.5	ND	117	20-166			
o-Xylene	36.5	1.0	"	32.7	ND	112	33-159			
Surrogate: 1,2-Dichloroethane-d4	*14.4*		"	*13.3*		*108*	*37-154*			
Surrogate: Toluene-d8	*13.4*		"	*13.3*		*100*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.2*		"	*13.3*		*99.3*	*45-146*			

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1705307 - EPA 5030 Water MS										
Matrix Spike Dup (1705307-MSD1)	**Source: 1705283-01**			Prepared & Analyzed: 06/01/17						
Benzene	31.1	1.0	ug/l	33.3	ND	93.4	34-141	2.85	32	
Toluene	30.5	1.0	"	33.3	ND	91.5	27-151	14.1	25	
Ethylbenzene	36.9	1.0	"	33.1	ND	112	29-160	7.06	50	
m,p-Xylene	71.2	2.0	"	66.5	ND	107	20-166	8.46	36	
o-Xylene	34.0	1.0	"	32.7	ND	104	33-159	7.12	26	
Surrogate: 1,2-Dichloroethane-d4	*15.4*		"	*13.3*		*115*	*37-154*			
Surrogate: Toluene-d8	*12.2*		"	*13.3*		*91.4*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.0*		"	*13.3*		*97.8*	*45-146*			

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Total Metals by EPA Method 200.8 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1705303 - EPA 200.8										
Blank (1705303-BLK1)				Prepared & Analyzed: 05/31/17						
Calcium	ND	0.0500	mg/L							
Magnesium	ND	0.0500	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (1705303-BS1)				Prepared & Analyzed: 05/31/17						
Calcium	4.65	0.0500	mg/L	5.00		93.0	85-115			
Magnesium	4.33	0.0500	"	5.00		86.6	85-115			
Potassium	4.33	0.0500	"	5.00		86.6	85-115			
Sodium	4.42	0.0500	"	5.00		88.5	85-115			
Duplicate (1705303-DUP1)	**Source: 1705254-01**			Prepared & Analyzed: 05/31/17						
Calcium	136	0.0500	mg/L		137			1.24	20	
Magnesium	19.8	0.0500	"		19.9			0.693	20	
Potassium	1.47	0.0500	"		1.48			0.900	20	
Sodium	189	0.0500	"		190			0.576	20	
Matrix Spike (1705303-MS1)	**Source: 1705254-01**			Prepared & Analyzed: 05/31/17						
Calcium	142	0.0500	mg/L	5.00	137	87.4	75-125			
Magnesium	23.8	0.0500	"	5.00	19.9	78.1	75-125			
Potassium	5.61	0.0500	"	5.00	1.48	82.7	75-125			
Sodium	194	0.0500	"	5.00	190	83.8	75-125			
Matrix Spike Dup (1705303-MSD1)	**Source: 1705254-01**			Prepared & Analyzed: 05/31/17						
Calcium	142	0.0500	mg/L	5.00	137	90.8	75-125	0.119	25	
Magnesium	23.9	0.0500	"	5.00	19.9	80.1	75-125	0.430	25	
Potassium	5.52	0.0500	"	5.00	1.48	80.8	75-125	1.68	25	
Sodium	194	0.0500	"	5.00	190	88.5	75-125	0.122	25	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Oil and Grease by EPA 1664A (Aqueous) - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1706007 - General Preparation										
Blank (1706007-BLK1)				Prepared: 06/01/17 Analyzed: 06/05/17						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (1706007-BS1)				Prepared: 06/01/17 Analyzed: 06/05/17						
Oil & Grease (HEM)	42.4	5.00	mg/L	40.0		106	82.2-110			
Matrix Spike (1706007-MS1)	**Source: 1705301-01**			Prepared: 06/01/17 Analyzed: 06/05/17						
Oil & Grease (HEM)	82.2	5.00	mg/L	40.0	42.6	99.0	80-110			
Matrix Spike Dup (1706007-MSD1)	**Source: 1705301-01**			Prepared: 06/01/17 Analyzed: 06/05/17						
Oil & Grease (HEM)	84.2	5.00	mg/L	40.0	42.6	104	80-110	2.40	20	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	Reported: 06/12/17 10:11

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1706020 - General Preparation										
Blank (1706020-BLK1)				Prepared: 06/02/17 Analyzed: 06/05/17						
Total Alkalinity	ND	5.00	mg/L as CaCO3							
Carbonate Alkalinity	ND	5.00	"							
Hydroxide Alkalinity	ND	5.00	"							
Bicarbonate Alkalinity	ND	5.00	"							
LCS (1706020-BS1)				Prepared: 06/02/17 Analyzed: 06/05/17						
Total Alkalinity	94.0	5.00	mg/L as CaCO3	100		94.0	80-120			
Duplicate (1706020-DUP1)		**Source: 1705281-01**		Prepared: 06/02/17 Analyzed: 06/05/17						
Total Alkalinity	940	5.00	mg/L as CaCO3		900			4.35	20	
Carbonate Alkalinity	ND	5.00	"		ND				200	
Hydroxide Alkalinity	ND	5.00	"		ND				200	
Bicarbonate Alkalinity	940	5.00	"		900			4.35	200	
Matrix Spike (1706020-MS1)		**Source: 1705281-01**		Prepared: 06/02/17 Analyzed: 06/05/17						
Total Alkalinity	1010	5.00	mg/L as CaCO3	100	900	110	80-120			
Matrix Spike Dup (1706020-MSD1)		**Source: 1705281-01**		Prepared: 06/02/17 Analyzed: 06/05/17						
Total Alkalinity	1020	5.00	mg/L as CaCO3	100	900	120	80-120	0.985	20	

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1705312 - General Preparation										
Blank (1705312-BLK1)				Prepared & Analyzed: 05/31/17						
Chloride	ND	1.00	mg/L							
Sulfate	ND	1.00	"							
Nitrite as N	ND	0.0200	"							
Nitrate as N	ND	0.800	"							
LCS (1705312-BS1)				Prepared & Analyzed: 05/31/17						
Nitrite as N	3.13	0.0200	mg/L	3.00		104	90-110			
Chloride	3.08	1.00	"	3.00		103	90-110			
Sulfate	15.0	1.00	"	15.0		100	90-110			
Nitrate as N	3.00	0.800	"	3.00		100	90-110			
Duplicate (1705312-DUP1)	**Source: 1705281-01**			Prepared & Analyzed: 05/31/17						
Sulfate	1040	100	mg/L		1020			2.83	20	
Nitrite as N	ND	0.0200	"		ND				10	
Chloride	490	100	"		460			6.30	20	
Nitrate as N	ND	0.800	"		ND				20	
Matrix Spike (1705312-MS1)	**Source: 1705281-01**			Prepared & Analyzed: 05/31/17						
Chloride	421	1.00	mg/L	3.00	460	NR	90-110			QM-02
Nitrite as N	2.98	0.0200	"	3.00	ND	99.5	90-110			
Sulfate	1010	1.00	"	15.0	1020	NR	90-110			QM-02
Nitrate as N	3.02	0.800	"	3.00	ND	101	90-110			

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Total Dissolved Solids by 160.1 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1706050 - General Preparation										
Blank (1706050-BLK1)				Prepared: 06/05/17 Analyzed: 06/06/17						
Total Dissolved Solids	ND	8.00	mg/L							
Duplicate (1706050-DUP1)		**Source: 1705281-01**		Prepared: 06/05/17 Analyzed: 06/06/17						
Total Dissolved Solids	5890	8.00	mg/L		5750			2.42	20	

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 170531046

Report To: Paul Shrewsbury
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Bill To: Accounts Payable
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Task No.: 170531046
Client PO:
Client Project: 1705281

Date Received: 5/31/17
Date Reported: 6/9/17
Matrix: Water - Ground

Customer Sample ID OW-1
Sample Date/Time: 5/30/17 8:00 AM
Lab Number: 170531046-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Total Organic Carbon	**117.7 mg/L**	SM 5310-B	1.0 mg/L	6/9/17	VDB

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

DATA APPROVED FOR RELEASE BY

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 170531046

Report To: Paul Shrewsbury
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Bill To: Accounts Payable
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Task No.: 170531046
Client PO:
Client Project: 1705281

Date Received: 5/31/17
Date Reported: 6/9/17
Matrix: Water - Ground

Customer Sample ID OW-2
Sample Date/Time: 5/30/17 10:05 AM
Lab Number: 170531046-02

Test	Result	Method	ML	Date Analyzed	Analyzed By
Total Organic Carbon	**1548.0 mg/L**	SM 5310-B	1.0 mg/L	6/5/17	VDB

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

DATA APPROVED FOR RELEASE BY

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 170531046

Report To: Paul Shrewsbury
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Bill To: Accounts Payable
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Task No.: 170531046
Client PO:
Client Project: 1705281

Date Received: 5/31/17
Date Reported: 6/9/17
Matrix: Water - Ground

Customer Sample ID OW-3
Sample Date/Time: 5/30/17 9:00 AM
Lab Number: 170531046-03

Test	Result	Method	ML	Date Analyzed	Analyzed By
Total Organic Carbon	**76.4 mg/L**	SM 5310-B	1.0 mg/L	6/5/17	VDB

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

DATA APPROVED FOR RELEASE BY

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 170531046

Report To: Paul Shrewsbury
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Bill To: Accounts Payable
Company: Summit Scientific
741 Corporate Circle, Suite J
Golden CO 80401

Task No.: 170531046
Client PO:
Client Project: 1705281

Date Received: 5/31/17
Date Reported: 6/9/17
Matrix: Water - Ground

Customer Sample ID OW-4
Sample Date/Time: 5/30/17 11:10 AM
Lab Number: 170531046-04

Test	Result	Method	ML	Date Analyzed	Analyzed By
Total Organic Carbon	**65.0 mg/L**	SM 5310-B	1.0 mg/L	6/5/17	VDB

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

DATA APPROVED FOR RELEASE BY

Colorado Analytical LABORATORIES, INC.

Detailed Analytical QC Summary

TASK NO: 170531046

Report To: Paul Shrewsbury
Summit Scientific

Receive Date: 5/31/17
Collector:

Project Name: 1705281

Test	QC Type	QC Batch	Result	Method
Total Organic Carbon	Blank	QC28065	<1.0 mg/L	SM 5310-B

Test	QC Type	QC Batch	LCL	UCL	% Rec	RPD	Method
Total Organic Carbon	Duplicate	QC28065	0	20		8.7	SM 5310-B
	LCS		90	110	99.8		

Approved: Steve Nielson Date: 6/9/17

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.

1/1

Chain of Custody Form

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Summit Scientific	Company Name: Same	1705281
Contact Name: Paul Shrewsbury	Contact Name: ____	____
Address: 741 Corporate Circle Suite J City Golden State CO Zip80401	Address: Same ____ City ____ State __ Zip ____	Task Number (Lab Use Only) CAL Task No. 170531046
Phone:303-277-9310 Fax:303-374-5933	Phone: Fax:	EMN
Email: pshrewsbury@s2scientific.com	Email:	Disposal Date(Lab Use Only)
Sample Collector:	PO No.:	

Colorado Analytical Laboratories, Inc.

Brighton Lab
240 South Main Street
Brighton, CO 80601
Lakewood Lab
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313
Fax: 303-659-2315

www.coloradolab.com

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Plant Tissue ☐
Ground Water ☑ Sludge ☐ Other ☐
Surface Water ☐ Compost ☐ ____

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)	TOC
5/30	0800	OW-1	1	☑	☑
"	1005	OW-2	1	☑	☑
"	0900	OW-3	1	☑	☑
"	1110	OW-4	1	☑	☑

Instructions: Need QC

C/S Info:
Deliver Via: HD
C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. 7 °C/Ice 4 Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	5/31/17 1441		5/31/17 1441				

S2

K.P. Kauffman Company, Inc 1675 Broadway, Suite 2800 Denver CO, 80202-4628	Project: Wattenberg Groundwater Project Number: [none] Project Manager: Susana Lara-Mesa	**Reported:** 06/12/17 10:11

Notes and Definitions

QM-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

08/04/2017 07:46
Serial No. A2X1018000405
TC: 615962

Job	3799
Sender	khinaman
Title	Microsoft Word - WY5680237.17.field.docx
Interface	Network
Language	PCLXL
Date	7:46:04 AUG 4 2017

2017 EPA Region 8 WY SANITARY SURVEY FORM
INVENTORY

DATE OF SURVEY: _____	COUNTY: Park	SURVEYOR NAME: _____
PWS ID: WY5680237	SYSTEM NAME: SNF - Beartooth Lake CG	

System representatives (including titles) present at survey: _____

Others present: _____

Comments: _____

EMERGENCY CONTACT

Emergency Contact Name: _____

Emergency cell phone: (_____) _____

Emergency email address: _____

Title: _____

Street: _____

City: _____ State: _____ County: _____ Zip: _____

SYSTEM OWNER OR MUNICIPAL LEGAL REPRESENTATIVE

Addressee Name: _____

Title: _____

Company (if Corporation, name of Corporation): _____

Street: _____

City: _____ State: _____ Zip: _____

Owner Phone: (_____) _____ Fax: (_____) _____

Email Address: _____

PRIMARY ADMINISTRATIVE CONTACT
(to receive ALL correspondence from EPA)

Addressee: _____

Title: _____

Street: _____

City: _____ State: _____ County: _____ Zip: _____

Administrative Contact Phone: (_____) _____ Fax: (_____) _____

Email Address: _____

ADDITIONAL CONTACT
(if any)

Addressee: _____

Title: _____

Street: _____

City: _____ State: _____ County: _____ Zip: _____

Contact Phone: (_____) _____ Fax: (_____) _____

Email Address: _____

Comments: _____

PUBLIC WORKS DIRECTOR,
CITY ENGINEER and/or WATER PLANT SUPERINTENDENT

Addressee: _____

Title: _____

Street: _____

City: _____ State: _____ County: _____ Zip: _____

Contact Phone: (_____) _____ Fax: (_____) _____

Email Address: _____

DESIGNATED OPERATOR OF SYSTEM

Name: _____

Certified Operator? @ ☐ Yes ☐ No ☐ TNC System (not required)

Treatment Cert. Level: _____ Distribution Cert. Level: _____

Treatment Cert. Exp. Date: _____ Distribution Cert. Exp. Date: _____

Cert. Authority: _____ Cert. Authority: _____

Phone: (_____) _____

Email Address: _____

Contract Operator*? ☐ Yes ☐ No

Date contract ends: _____

Comments: _____

Go to: http://deq.wyoming.gov/wqd/operator-certification/
Click on: Check Facility Records then **Click on:** Check Operator Records

ALTERNATE OPERATOR

Name: _____

Certified Operator? ☐ Yes ☐ No ☐ Not required

Treatment Cert. Level: _____ Distribution Cert. Level: _____

Treatment Cert. Exp. Date: _____ Distribution Cert. Exp. Date: _____

Cert. Authority: _____ Cert. Authority: _____

Phone: (_____) _____

Email Address: _____

Comments: _____

Go to: http://deq.wyoming.gov/wqd/operator-certification/

Click on: Check Facility Records **then Click on:** Check Operator Records

WATER SYSTEM CLASSIFICATION
for operator certification

System Treatment Classification Level: _____

System Distribution Classification Level: _____

Comments: _____

Go to: http://deq.wyoming.gov/wqd/operator-certification/
Click on: Check Facility Records

WATER SYSTEM CLASSIFICATION
from PWS Inventory

☐ C = Community

☐ NTNC = Non-Transient Non-Community

☒ NC = Transient Non-Community

Comments: _____

SYSTEM PHYSICAL ADDRESS

Street: _____

City: _____ State: _____ Zip: _____

PHYSICAL LOCATION

Physical Location and Directions: _____

DEQ DISTRICT ENGINEER

James Brough, P.E., **District Engineer**

Phone: (307)-335-6961

Email: James.Brough@wyo.gov

COUNTY AND/OR CHS SANITARIAN

Michelle Schwope, **CHS Specialist**

Phone: (307)-548-2154

Email: chelle.schwope@wyo.gov

PERIOD OF OPERATION

☐ Year-round

☒ Part of the year: From 7/1 to 9/30

If only open part of the year, does the entire distribution system remain pressurized during the entire off period? ☐ Yes ☒ No

Comments: website says 7/1 to 9/12

SERVICE CONNECTIONS

Total Service Connections (Active and Inactive): 2

Service Connections Metered? ☐ Yes ☐ No _____

Number of metered service connections: _____

Comments: _____

OWNER TYPE

☒ 1 Federal Government

☐ 2 Private: Subdivision, Investor, Trust, Cooperative, Water Association, etc.

Is this PWS operating with a lease on Federal land? ☐ Yes ☐ No

If Yes, enter name of the Federal land here: _____

☐ 3 State Government

☐ 4 Local Government Authority: Commission, District, Municipality, City, etc.

☐ 5 Mixed Public/Private

☐ 6 Native American Indian Tribes & Reservations _____

☐ 7 Other _____

Comments: _____

POPULATION DIRECTLY SERVED
(do not include populations of consecutive PWSs)
(do not double count populations)

Residential Population (year-round residents): 0 (people)

Non-Residential Non-Transient Population: 0 (people)
(6-12 months/year, e.g. students, employees)

Transient Population (less than 6 months/year): 80 (people per day)
(Average daily number during peak 60 days of operation)
(e.g. customers, visitors)

Does the water system serve at least 25 individuals daily at least 60 days of the year (does not need to be consecutive days)? ☒ Yes ☐ No

Comments (source(s) of population info): _____

SERVICE CATEGORY (check all that apply)

☐ AP Airport
☐ BA Bathing/Swimming
☐ BR Bar
☒ CG Campground
☐ CH Church
☐ DC Daycare Center
☐ DR Dude Ranch
☐ HS Hospital
☐ IB Interstate Bottler
☐ IF Industrial/Agricultural
☐ IN Institution
☐ LB Local Bottler
☐ LO Lodge
☐ MA Marina
☐ MH Mobile Home Park
☐ MO Motel/Hotel
☐ PC Picnic Area
☐ RA Rest Area
☐ RC Recreation
☐ RS Residential
☐ RT Restaurant
☐ RV RV Park
☐ SC School
☐ SD Subdivision
☐ SK Ski Area
☐ SS Service Station
☐ US Water User's Association
☐ VC Visitor Center
☐ VM Vending Machine
☐ WH Water Hauler
☐ XX Other _____

Primary Service Category Description: _____

Comments: _____

SOURCES (check all that apply)

☐ SW = Surface Water ☐ SWP = Surface Water Purchased

☒ GW = Groundwater ☐ GWP= Groundwater Purchased

☐ GWUDI = Ground Water Under the Direct Influence of Surface Water

If mixed, does GW receive full SW Treatment? ☐ Yes ☐ No

Is the current water source adequate in quantity?
☐ Yes ☐ No Describe: _____

Have there been any interruptions in service since the last survey?
☐ Yes ☐ No Describe: _____

Have there been reports of a water borne disease (2 or more people)?
☐ Yes ☐ No Describe: _____

Have there been any changes to the water system since the last survey?
☐ Yes ☐ No Describe: _____

Are there any changes that are planned?
☐ Yes ☐ No Describe: _____

Comments: _____

SUMMARY (Describe the water system in a paragraph or two)

_____

The following abbreviations will be used throughout this document: NI = no information, NA = not applicable, NR = not requested, @ = potential significant deficiency.

Update Significant Deficiency Messages

SIGNIFICANT DEFICIENCIES

Significant deficiencies include, but are not limited to, defects in the design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system, that the EPA determines to be causing, or have the potential for causing, the introduction of contamination into the water delivered to consumers. Please note the instructions for responding to significant deficiencies in the attached cover letter. Failure to provide a response to the EPA could result in a violation.

UNCORRECTED SIGNIFICANT DEFICIENCIES FROM PRIOR SANITARY SURVEY

Numbered significant deficiencies and associated numbered photos if applicable

RECOMMENDATIONS

Numbered recommendations and associated numbered photos if applicable

1. **Significant Deficiency: No Emergency Response Plan (ERP)**

   The Emergency Response Plan (ERP) must detail emergency operations procedures for possible foreseeable emergencies such as power outage, loss of water, equipment failure, development of unsafe conditions, and other emergency conditions. Templates, including instructions, for developing ERPs may be found on the USEPA Region 8 Drinking Water Online website: http://www.epa.gov/region8/waterops/reporting/forms.html#erp .

CONSECUTIVE SYSTEMS

(i.e. does this PWS receive some or all of its finished water from another PWS?)

☐ **NA**

Name of Wholesaler (System Receives Water From)	PWS ID of Wholesaler	Water Source Type	Connection Type
_____ Comments: _____	_____ Comments: _____	☐ GW ☐ SW ☐ Mixed If mixed, does GW receive full SW Treatment? ☐ Yes ☐ No. Type of residual disinfectant in water supplied: ☐ Chlorine ☐ Chloramines ☐ None Type of corrosion inhibitor applied: ☐ Phosphate-based ☐ Silicate-based ☐ None Comments: _____	☐ Permanent ☐ Seasonal, # Days/Yr: _____ ☐ Emergency Only Comments: _____
_____ Comments: _____	_____ Comments: _____	☐ GW ☐ SW ☐ Mixed If mixed, does GW receive full SW Treatment? ☐ Yes ☐ No. Type of residual disinfectant in water supplied: ☐ Chlorine ☐ Chloramines ☐ None Type of corrosion inhibitor applied: ☐ Phosphate-based ☐ Silicate-based ☐ None Comments: _____	☐ Permanent ☐ Seasonal, # Days/Yr: _____ ☐ Emergency Only Comments: _____
_____ Comments: _____	_____ Comments: _____	☐ GW ☐ SW ☐ Mixed If mixed, does GW receive full SW Treatment? ☐ Yes ☐ No. Type of residual disinfectant in water supplied: ☐ Chlorine ☐ Chloramines ☐ None Type of corrosion inhibitor applied: ☐ Phosphate-based ☐ Silicate-based ☐ None Comments: _____	☐ Permanent ☐ Seasonal, # Days/Yr: _____ ☐ Emergency Only Comments: _____

How many master meter connections exist from the wholesale system to the consecutive system? _____

Who is responsible for maintenance of the master meter connection(s) from the wholesale system?

- ☐ Wholesaler
- ☐ Consecutive system

Comments: _____

If the consecutive system is responsible:

Check the condition of the principal master meter and the pit for leaks or flooding and describe any concerns: _____

How often are the master meter connections inspected? _____

How often are the master meter connections serviced? _____

Is there standing water present in any meter pits? ☐ Yes ☐ No

If so, what is the source of the standing water?

- ☐ Leaks @
- ☐ Groundwater
- ☐ Don't know @

Comments: _____

If PWS Purchases Water from a WATER HAULER:

Name of hauler: _____

WY Dept. of Agriculture license number: _____

Name of the water system supplying water to the hauler: _____

Is there a water tight cap on the (water system's) fill port? @ ☐ Yes ☐ No

How does the operator check chlorine residual at the time of delivery? _____

Comments: _____

WHOLESALE SYSTEMS

(i.e. does this PWS supply finished water to another PWS?)

☐ NA

Name of Consecutive (System Supplies Water To)	PWS ID or State ID of Consecutive (if no PWS ID provide contact and address)	Population	Connection Type
_____	_____	_____	☐ Permanent ☐ Seasonal, # Days/Yr _____ ☐ Emergency Only ☐ Water is hauled (bulk water fill stations are described in Distribution section)
_____	_____	_____	☐ Permanent ☐ Seasonal, # Days/Yr _____ ☐ Emergency Only ☐ Water is hauled (bulk water fill stations are described in Distribution section)
_____	_____	_____	☐ Permanent ☐ Seasonal, # Days/Yr _____ ☐ Emergency Only ☐ Water is hauled (bulk water fill stations are described in Distribution section)

Comments: _____

How many master meter connections exist off the wholesale system? _____

Who is responsible for maintenance of those connection(s)?

☐ Wholesaler

☐ Consecutive system

Comments: _____

If the wholesaler is responsible, how often is inspection performed on the master meter connection(s)? _____

If the wholesaler is responsible, how often is maintenance performed on the master meter connection(s)? _____

Does standing water exist in any meter pits for which the wholesale system is responsible? ☐ Yes ☐ No

If so, what is the source of the standing water?

☐ Leaks @

☐ Groundwater

☐ Don't know @

Comments: _____

SOURCE DATA

ACTIVE (PHYSICALLY CONNECTED) WELLS AND WELL PUMPS

(if well is GWUDI and fully treated as SW, these will be recommendations)

☐ NA

Well Name:	Beartooth Campground #1	Beartooth Campground #2	____
Well owner (if different than system owner):	____	____	____
Facility ID (from PWS inventory, e.g., WL01):	WL01	WL02	____
Well Location: (well house, well pit/pitless adapter, driveway/parking lot, combination, etc.)	____	____	____
Does system want this well to be considered inactive? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Adequately protected from vehicle damage? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If well is located in a pit or vault, is the pit or vault completely watertight?	☐ Yes ☐ No ☐ NA ____	☐ Yes ☐ No ☐ NA ____	☐ Yes ☐ No ☐ NA ____
If no, is the pit or vault completed with drainage or a sump pump for permanent or portable use? @ If applicable, indicate type (permanent pump, portable pump, or drainage)	☐ Yes ☐ No ☐ NA Type: ____	☐ Yes ☐ No ☐ NA Type: ____	☐ Yes ☐ No ☐ NA Type: ____
Is the pit located in a building?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
WY DEQ and/or WY SEO permit #:	62852	62850	____
Are there any approved WY DEQ Chapter 12 variances for this well? If yes, describe what type of variance was approved.	☐ Yes ☐ No ____	☐ Yes ☐ No ____	☐ Yes ☐ No ____
Total Well Depth (ft):	75	105	____
Depth range of shallowest casing perforations (ft):	70 to 75	100 to 105	____ to ____
Actual yield (gpm):	____	____	____
Well log or Statement of Completion on site? **(If yes, please copy or photograph and submit with report)**	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Well Construction			
Does SW runoff drain away from the wellhead (including wells in pits or vaults)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does well casing terminate at least 12" above the concrete floor? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the well casing terminate at least 18" above the natural ground surface? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
What is the actual casing height (inches)?	____	____	____
Any holes or openings observed in the well or its appurtenances? @ If yes, describe.	☐ Yes ☐ No ☐ NA ____	☐ Yes ☐ No ☐ NA ____	☐ Yes ☐ No ☐ NA ____
Does the well have a sanitary seal with tightly bolted cap? @ (May need operator to open well cap to verify; explain why if unable to verify)	☐ Yes ☐ No ☐ Unknown ____	☐ Yes ☐ No ☐ Unknown ____	☐ Yes ☐ No ☐ Unknown ____
Is a gasket visible?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the well cap move?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Explain	____	____	____
Is well vented (vent not required)?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
What is the height from the ground level to the screen of the vent (inches)?	____	____	____
Does the vent terminate at or above the top of the casing or pitless unit? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is vent facing downward? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Vent screened with #24 mesh? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is there a source water sample tap for GWR compliance?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Where is the source water tap located?	____	____	____

Well Name:	**Beartooth Campground #1**	**Beartooth Campground #2**	_____
Is there an air release/vacuum relief valve (not required)?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Discharge Piping Termination			
- In a downward position? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
- At least 8" above the floor? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
- Screened with #24 mesh? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments:	_____	_____	_____
Well Pumps	☐ NA		
Submersible Pump?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Other type of pump? (if other, describe and indicate location in the comment field below)	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
NSF-60 lubricant used?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Operable and in good condition?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Maintenance program in place?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the external pump subject to flooding? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Spare parts available?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Emergency power available?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments	_____	_____	_____

Are there any sources of pollution near the wells which could possibly impact water quality? @ ☐ Yes ☐ No
Examples: Septic systems, chemical storage/mixing facilities, agriculture activities, industrial activities, animal enclosures, cleaning supplies, oil/fuel, etc)

If yes, indicate impacted well(s) and provide general location and comments (please locate on aerial map and provide photos): _____

How far from the well is the source of pollution located? _____

Mice or other animals and their droppings in immediate area (well house, vault, pit, etc.) @ ☐ Yes ☐ No _____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No _____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No _____

How does the system handle sewage?

☐ Centralized Sewage Treatment

☐ Septic Systems with Pumped Vaults

☐ Septic Systems with Leach Fields (mark location on aerial if near well)

Comments: _____

Form U.W. 6

IF WELL IS TO BE ABANDONED, SEE ITEM 15, PAGE 4

RECEIVED FEB 6 1980 STATE ENGINEER Cheyenne, WYOMING

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.

STATE OF WYOMING

OFFICE OF THE STATE ENGINEER

FILED JAN 19 '83

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL

PERMIT NO. U.W. 62852 NAME OF WELL Beartooth Campground #1

1. NAME OF OWNER Shoshone National Forest

2. ADDRESS P.O. Box 2140 Zip Code

3. USE OF WATER: Domestic ☒ Stock Watering ☐ Irrigation ☐ Municipal ☐ Industrial ☐ Miscellaneous ☒

Campground water supply

4. LOCATION OF WELL: SE ¼ SE ¼ of Section 6, T. 57 N., R. 105 W., of the 6th P.M. (or W.R.M.), Wyoming, being specifically

(Bearing and Distance)

or ____ ft. North South and ____ ft. East West from the ____ corner of Section ____, T. ____ N., R. ____ W.
(Strike out words not needed).

5. TYPE OF CONSTRUCTION: Drilled ☒ CP 650 WS Mi Rotary (Type of Rig) Dug ☐ Driven ☐ Jetted ☐

Other

6. CONSTRUCTION: Total Depth of Well 75 ft. Depth to Static Water Level 29 ft.

a. Casing Schedule New ☒ Used ☐

6 5/8 OD diameter from 0 ft. to 75 ft. Material Steel Gage .280

____ diameter from ____ ft. to ____ ft. Material ____ Gage ____

____ diameter from ____ ft. to ____ ft. Material ____ Gage ____

b. Perforations: Type of perforator used Mankini 6 Rows

Size of perforations 3/8 inches by 3 inches.

Number of perforations and depths where perforated:

60 perforations from 70 ft. to 75 feet.

____ perforations from ____ ft. to ____ feet.

c. Was well screen installed? Yes ☐ No ☒

Diameter: ____ slot size: ____ set from ____ feet to ____ feet.

Diameter: ____ slot size: ____ set from ____ feet to ____ feet.

d. Was well gravel packed? Yes ☐ No ☒ Size of gravel

e. Was surface casing used Yes ☐ No ☒ Was it cemented in place? Yes ☐ No ☐

7. NAME & ADDRESS OF DRILLER Clair H. Stephenson Fillmore Ut 84631

8. DATE OF COMPLETION OF WELL (including pump installation) Sept 19 - 1979

9. PUMP INFORMATION: Manufacturer Baker Monitor Type Hand Model 11 HP

Source of power Hand Horsepower - Depth of Pump Setting 42

Amount of Water Being Pumped 10 Gallons Per Minute. (For springs or flowing wells, see item 11.)

Permit No. U.W. 62852 Book No. 108 Page No. 83

10. **PUMP TEST:** Was a pump test made? Yes ☒ No ☐

If so, by whom Clair A Stephenson Address Fillmore UT 84631

Yield: 50 gal./min. with 72 foot drawdown after 2 hours.

Yield: 25 gal./min. with 54 foot drawdown after 2 hours.

11. **FLOWING WELL** (Owner is responsible for control of flowing well).

If well yields artesian flow, yield is _____ gal./min. Surface pressure is _____ lb./sq. inch, or _____ feet of water.

The flow is controlled by: valve ☐ cap ☐ plug ☐

Does well leak around casing? Yes ☐ No ☐

12. **LOG OF WELL:** Total depth drilled 75 feet.

Depth of completed well 75 feet. Diameter of well 6 inches.

Depth to first water bearing formation 50 feet.

Depth to principal water bearing formation Top 50 feet to Bottom 75 feet.

Ground Elevation, if known _____

From Feet	To Feet	Material Type, Texture, Color	REMARKS (Cementing, Shutoff, Packing, etc.)	Indicate Water Bearing Formation	Indicate Perforated Casing Location
0	5	Top Soil			
5	15	Clay Gravel Mix			
15	50	Green Shale			
50	75	Granite Rock		50 75	70 - 75
		Cement Grout	0- 10 ft		

QUALITY OF WATER INFORMATION:

Was a chemical analysis made? Yes ☐ No ☐

If so, please include a copy of the analysis with this form.

If not, do you consider the water as: Good ☐ Acceptable ☐ Poor ☐ Unusable ☐

9 — Park

Form U.W. 6

NOTE: Do not fold this form. Use typewriter or print neatly with black ink.

IF WELL IS TO BE ABANDONED, SEE ITEM 15, PAGE 4

STATE OF WYOMING

OFFICE OF THE STATE ENGINEER

STATEMENT OF COMPLETION AND DESCRIPTION OF WELL

PERMIT NO. U.W. 62850   NAME OF WELL Beartooth Campground #2

1. NAME OF OWNER Shoshone National Forest
2. ADDRESS P.O. Box 2140 Cody, WY Zip Code 82414
3. USE OF WATER: Domestic ☒ Stock Watering ☐ Irrigation ☐ Municipal ☐ Industrial ☐ Miscellaneous ☒
   Campground water supply
4. LOCATION OF WELL: ~~NE~~ SW ¼ ~~SE~~ SW ¼ of Section ~~4~~ 5 T. ~~5~~ 57 N., R. 105 W., of the 6th P.M. (or W.R.M.),
   SW per map rec'd 1-6-97 TH; Per SEO Petition UW 2008-6
   Wyoming, being specifically ______ (Bearing and Distance)
   or ____ ft. North South and ____ ft. East West from the ____ corner of Section ____, T. ____ N., R. ____ W.
   (Strike out words not needed).
5. TYPE OF CONSTRUCTION: Drilled ☒ CP 650 WS Air Rotary (Type of Rig) Dug ☐ Driven ☐ Jetted ☐
   Other ______
6. CONSTRUCTION: Total Depth of Well 105 ft. Depth to Static Water Level 28 ft.
   a. Casing Schedule New ☒ Used ☐
   6 5/8 OD diameter from 0 ft. to 105 ft. Material Steel Gage .280
   ____ diameter from ____ ft. to ____ ft. Material ____ Gage ____
   ____ diameter from ____ ft. to ____ ft. Material ____ Gage ____
   b. Perforations: Type of perforator used Machine 6 Rows
   Size of perforations 3/8 inches by 3 inches.
   Number of perforations and depths where perforated:
   60 perforations from 100 ft. to 105 feet.
   ____ perforations from ____ ft. to ____ feet.
   c. Was well screen installed? Yes ☐ No ☒
   Diameter: ____ slot size: ____ set from ____ feet to ____ feet.
   Diameter: ____ slot size: ____ set from ____ feet to ____ feet.
   d. Was well gravel packed? Yes ☐ No ☒ Size of gravel ____
   e. Was surface casing used Yes ☐ No ☒ Was it cemented in place? Yes ☐ No ☐
7. NAME & ADDRESS OF DRILLER Clair N. Stephenson Fillmore, Ut 84631
8. DATE OF COMPLETION OF WELL (including pump installation) Sept 18 - 1979
9. PUMP INFORMATION: Manufacturer Baker Monitor Type Hand Model 11 HP
   Source of power Hand Horsepower ____ Depth of Pump Setting 84
   Amount of Water Being Pumped 10 Gallons Per Minute. (For springs or flowing wells, see item 11.)

Permit No. U.W. 62850   Book No. 108 Page No. 81

10. **PUMP TEST:** Was a pump test made? Yes ☒ No ☐

If so, by whom Clair A. Stephenson Address Fillmore Ut 84631

Yield: Well Pumped Out gal./min. with _____ foot drawdown after _____ hours.

Yield: _____ gal./min. with _____ foot drawdown after _____ hours.

11. **FLOWING WELL** (Owner is responsible for control of flowing well).

If well yields artesian flow, yield is _____ gal./min. Surface pressure is _____ lb./sq. inch, or _____ feet of water.

The flow is controlled by: valve ☐ cap ☐ plug ☐

Does well leak around casing? Yes ☐ No ☐

12. **LOG OF WELL:** Total depth drilled 105 feet.

Depth of completed well 105 feet. Diameter of well _____ inches.

Depth to first water bearing formation 95 feet.

Depth to principal water bearing formation Top 95 feet to Bottom 105 feet.

Ground Elevation, if known _____

From Feet	To Feet	Material Type, Texture, Color	REMARKS (Cementing, Shutoff, Packing, etc.)	Indicate Water Bearing Formation	Indicate Perforated Casing Location
0	3	Top Soil			
3	55	Clay Gravel Mix			
55	95	Green Shale			
95	105	Granite Rock Little Water			
		Release Well Well Pump Good In Spring			
		Cement Grout	0- 10 ft.		

QUALITY OF WATER INFORMATION:

Was a chemical analysis made? Yes ☐ No ☐

If so, please include a copy of the analysis with this form.

If not, do you consider the water as: Good ☐ Acceptable ☐ Poor ☐ Unusable ☐

SOURCE DATA
ACTIVE (PHYSICALLY CONNECTED) WELLS AND WELL PUMPS
(if well is GWUDI and fully treated as SW, these will be recommendations)
☐ NA

Well Name:	____	____	____
Well owner (if different than system owner):	____	____	____
Facility ID (from PWS inventory, e.g., WL01):	____	____	____
Well Location: (well house, well pit, pitless adapter, combination, driveway/ parking lot, other)	____	____	____
Does system want this well to be considered inactive? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Adequately protected from vehicle damage? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If well is located in a pit or vault, is the pit or vault completely watertight?	☐ Yes ☐ No ☐ NA ____	☐ Yes ☐ No ☐ NA ____	☐ Yes ☐ No ☐ NA ____
If no, is the pit or vault completed with drainage or a sump pump for permanent or portable use? @ If applicable, indicate type (permanent pump, portable pump, or drainage)	☐ Yes ☐ No ☐ NA Type: ____	☐ Yes ☐ No ☐ NA Type: ____	☐ Yes ☐ No ☐ NA Type: ____
Is the pit located in a building?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
WY DEQ and/or WY SEO permit #:	____	____	____
Are there any approved WY DEQ Chapter 12 variances for this well? If yes, describe what type of variance was approved.	☐ Yes ☐ No ____	☐ Yes ☐ No ____	☐ Yes ☐ No ____
Total Well Depth (ft):	____	____	____
Depth range of shallowest casing perforations (ft):	____ to ____	____ to ____	____ to ____
Actual yield (gpm):	____	____	____
Well log or Statement of Completion on site? **(If yes, please copy or photograph and submit with report)**	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Well Construction			
Does SW runoff drain away from the wellhead (including wells in pits or vaults)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does well casing terminate at least 12" above the concrete floor? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the well casing terminate at least 18" above the natural ground surface? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
What is the actual casing height (inches)?	____	____	____
Any holes or openings observed in the well or its appurtenances?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
If yes, describe.	____	____	____
Does the well have a sanitary seal with tightly bolted cap? @ (May need operator to open well cap to verify; explain why if unable to verify)	☐ Yes ☐ No ☐ Unknown ____	☐ Yes ☐ No ☐ Unknown ____	☐ Yes ☐ No ☐ Unknown ____
Is a gasket visible?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the well cap move?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Explain	____	____	____
Is well vented (vent not required)?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
What is the height from the ground level to the screen of the vent (inches)?	____	____	____
Does the vent terminate at or above the top of the casing or pitless unit? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is vent facing downward? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Vent screened with #24 mesh? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is there a source water sample tap for GWR compliance?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA

Well Name:	____	____	____
Where is the source water tap located?	____	____	____
Is there an air release/vacuum relief valve (not required)?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Discharge Piping Termination			
- In a downward position? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
- At least 8" above the floor? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
- screened with #24 mesh? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments:	____	____	____
Well Pumps			
Submersible Pump?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Other type of pump? (if other, describe and indicate location in the comment field below)	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
NSF-60 lubricant used?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Operable and in good condition?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Maintenance program in place?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the external pump subject to flooding? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Spare parts available?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Emergency power available?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments	____	____	____

Are there any sources of pollution near the wells which could possibly impact water quality? @ ☐ Yes ☐ No
Examples: Septic systems, chemical storage/mixing facilities, agriculture activities, industrial activities, animal enclosures, cleaning supplies, oil/fuel, etc)

If yes, indicate impacted well(s) and provide general location and comments (please locate on aerial map and provide photos): ____

How far from the well is the source of pollution located? ____

Mice or other animals and their droppings in immediate area **(well house, vault, pit, etc.) @** ☐ Yes ☐ No ____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No ____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No ____

How does the system handle sewage?

☐ Centralized Sewage Treatment
☐ Septic Systems with Pumped Vaults
☐ Septic Systems with Leach Fields (mark location on aerial if near well)

Comments: ____

SOURCE DATA
SPRINGS AND ASSOCIATED PUMPS
(if spring is GWUDI and fully treated as SW, these will be recommendations)

☐ NA

Spring name: _____

Spring owner if different than system owner: _____

Facility ID (from PWS inventory, e.g., SPR01): _____

WY DEQ permit number: _____

WY SEO permit number: _____

Are there any approved WY DEQ Chapter 12 variances for this spring? If yes, describe what type of variance was approved: _____

Description of the intake to the spring collection box (i.e., how the spring water is collected and conveyed into the box): _____

Actual yield (gpm): _____

Please copy or photograph any available construction diagrams or "as-builts" and submit with the sanitary survey report.

Comments: _____

SPRING COLLECTION BOX	Yes	No	NA
Are the spring collection area and spring box fenced to keep large animals away? @	☐	☐	☐
Does surface water runoff drain away from the collection area? @	☐	☐	☐
Is there deep rooted vegetation around the spring collection area and spring box? @	☐	☐	☐
Describe: _____			
Does the spring collection box have the following features:			
Proper shoe box cover? @	☐	☐	☐
Rubber gasket on the access hatch cover? @	☐	☐	☐
Air vents screened with #24 mesh? @	☐	☐	☐
Is the hatch cover locked? @	☐	☐	☐
Overflow screened with #24 mesh screen? @	☐	☐	☐
Does overflow have a free fall of at least 12 inches? @	☐	☐	☐
Is the spring collection box water tight to prevent inflow of unwanted surface water? @	☐	☐	☐

Comments: _____

SOURCE PUMPS

Location of the pump station: _____

How many pumps at the facility? _____

Type of pump(s): _____

	Yes	No	NA
Are the correct types of lubricants (NSF-60) used?	☐	☐	☐
Are pumps operable and in good condition?	☐	☐	☐
Is there a maintenance program in operation?	☐	☐	☐
Is the pump station subject to flooding? @	☐	☐	☐
Are spare parts available?	☐	☐	☐
Is emergency power available?	☐	☐	☐

Comments: _____

For any other hatches/manholes that are part of the spring collection system or on the transmission line from the spring box to ~~the~~ a storage tank or distribution system: (describe the condition of each)

Proper shoe box cover on the access hatch/manhole? @ ☐ Yes ☐ No Description and location: _____

Rubber gasket on the access hatch/manhole cover? @ ☐ Yes ☐ No

Is the hatch cover Locked? @ ☐ Yes ☐ No

Are there any sources of pollution near the springs which could possibly impact water quality? @ ☐ Yes ☐ No
(Examples: Septic systems, chemical storage/mixing facilities, agriculture activities, industrial activities, animal enclosures, cleaning supplies, oil/fuel, etc)

If yes, indicate impacted spring(s) and provide general location and comments (please locate on aerial map and provide photos): _____

How far from the spring is the source of pollution located? _____

Mice or other animals and their droppings in immediate area **(spring house, etc.) @** ☐ Yes ☐ No _____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No _____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No _____

How does the system handle sewage?

☐ Centralized Sewage Treatment

☐ Septic Systems with Pumped Vaults

☐ Septic Systems with Leach Fields (mark location on aerial if near spring)

Comments: _____

SOURCE DATA FOR INTAKE LOCATED IN INFILTRATION GALLERIES AND ASSOCIATED PUMPS

☐ NA

INFILTRATION GALLERIES

Infiltration gallery name: _____

Infiltration gallery owner if different than system owner: _____

Facility ID (from PWS Inventory, e.g., IG01): _____

WY DEQ permit number: _____

WY SEO permit number: _____

Physical description: _____

Depth? _____

Actual yield (gpm): _____

Are there seasonal algal blooms present? ☐ Yes ☐ No

Describe: _____

Is an algaecide ever used to control algae? ☐ Yes ☐ No

If yes, describe: _____

Please copy or photograph any available construction diagrams or "as-builts" and submit with the sanitary survey report

SOURCE PUMPS

Location of the pump station: _____

How many pumps at the facility? _____

Type of pump(s): _____

	Yes	No	NA
Are the correct types of lubricants (NSF-60) used?	☐	☐	☐
Are pumps operable and in good condition?	☐	☐	☐
Is there a maintenance program in operation?	☐	☐	☐
Is the pump station subject to flooding?	☐	☐	☐
Are spare parts available?	☐	☐	☐
Is emergency power available?	☐	☐	☐

Comments: _____

Are there any sources of pollution near the infiltration gallery (e.g., agriculture/industrial activities, cleaning supplies, oil/fuel, etc.) which could impact water quality? @ ☐ Yes ☐ No

If yes, indicate impacted infiltration gallery(ies) and provide general location and comments (please locate on aerial map and provide photos):
_____

How far from the infiltration gallery is the source of pollution located? _____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No _____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No _____

Comments: _____

SOURCE DATA FOR INTAKE LOCATED IN STREAMS, AND ASSOCIATED PUMPS

☐ NA

STREAMS

Stream name: _____

Facility ID (from PWS Inventory, e.g., IN01): _____

WY DEQ permit number: _____

WY SEO permit number: _____

Is the area around the intake restricted?
☐ Yes ☐ No

Are there multiple intakes located at different levels?
☐ Yes ☐ No Describe: _____

Are the intake(s) screened?
☐ Yes ☐ No

Frequency of intake inspection: _____

Date of last inspection: _____

Are there seasonal algal blooms present? ☐ Yes ☐ No

Describe: _____

Is an algaecide ever used to control algae? ☐ Yes ☐ No

If yes, describe: _____

Please copy or photograph any available construction diagrams or "as-builts" and submit with the sanitary survey report

INTAKE PUMPS

Location of the pump station: _____

How many pumps at the facility? _____

Type of pump(s): _____

	Yes	No	NA
Are the correct types of lubricants (NSF-60) used?	☐	☐	☐
Are pumps operable and in good condition?	☐	☐	☐
Is there a maintenance program in operation?	☐	☐	☐
Is the pump station subject to flooding?	☐	☐	☐
Are spare parts available?	☐	☐	☐
Is emergency power available?	☐	☐	☐

Comments: _____

Are there any sources of pollution near the stream (e.g., agriculture/industrial activities, cleaning supplies, oil/fuel, etc.) which could impact water quality? @ ☐ Yes ☐ No

If yes, indicate impacted stream(s) and provide general location and comments (please locate on aerial map and provide photos): _____

How far from the stream is the source of pollution located? _____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No _____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No _____

Comments: _____

SOURCE DATA FOR INTAKE LOCATED IN RESERVOIRS, LAKES AND PONDS AND ASSOCIATED PUMPS

☐ NA

Reservoir or lake name: _____

Facility ID (from PWS Inventory, e.g., IN01): _____

WY DEQ permit number: _____

WY SEO permit number: _____

RESERVOIRS

Is the area around the intake(s) restricted? ☐ Yes ☐ No

Are there multiple intakes located at different levels? ☐ Yes ☐ No Describe: _____

Depth of intake(s): _____

Distance from shore: _____

Are the intake(s) screened? ☐ Yes ☐ No

Frequency of intake inspection: _____

Date of last inspection: _____

Are there seasonal algal blooms present? ☐ Yes ☐ No

Describe: _____

Is an algaecide ever used to control algae? ☐ Yes ☐ No

If yes, describe: _____

Please copy or photograph any available construction diagrams or "as-builts" and submit with the sanitary survey report

INTAKE PUMPS

Location of the pump station: _____

How many pumps at the facility? _____

Type of pump(s): _____

	Yes	No	NA
Are the correct types of lubricants (NSF-60) used?	☐	☐	☐
Are pumps operable and in good condition?	☐	☐	☐
Is there a maintenance program in operation?	☐	☐	☐
Is the pump station subject to flooding?	☐	☐	☐
Are spare parts available?	☐	☐	☐
Is emergency power available?	☐	☐	☐

Comments: _____

Are there any sources of pollution near the reservoir/lake/pond (e.g., agriculture/industrial activities, cleaning supplies, oil/fuel, etc.) which could impact water quality? @ ☐ Yes ☐ No

If yes, indicate impacted reservoir/lake/pond(s) and provide general location and comments (please locate on aerial map and provide photos):

_____

How far from the reservoir/lake/pond is the source of pollution located? _____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No _____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No _____

Comments: _____

SOURCE DATA
EMERGENCY BACKUP SOURCE WATER

Describe any backup source water possibly available during an emergency to the PWS, or indicate none: _____

Is the backup water source physically disconnected from the water system? ☐ Yes ☐ No _____
(if this is a raw water source and is still physically connected to the system, then stop filling out this section and complete the applicable source data section)

Backup source name: _____

Facility ID (from PWS Inventory, e.g., IN01, WL01, etc.): _____

WY DEQ permit number: _____

WY SEO permit number: _____

Are there seasonal algal blooms present? ☐ Yes ☐ No ☐ NA

Describe: _____

Is an algaecide ever used to control algae? ☐ Yes ☐ No ☐ NA

If yes, describe: _____

Please copy or photograph any available construction diagrams or "as-builts" and submit with the sanitary survey report

Are there any sources of pollution near the emergency backup source (e.g., agriculture/industrial activities, cleaning supplies, oil/fuel, etc.) which could impact water quality? @ ☐ Yes ☐ No

If yes, indicate impacted emergency backup source(s) and provide general location and comments (please locate on aerial map and provide photos): _____

How far from the emergency backup source is the source of pollution located? _____

Mice or other animals and their droppings in immediate area **(well house, vault, pit, etc.).** ☐ Yes ☐ No _____

Are there seasonal variations in the quantity of the water? ☐ Yes ☐ No _____

Are there seasonal variations in the quality of the water? ☐ Yes ☐ No _____

Comments: _____

RAW WATER TO TREATMENT PLANT TRANSMISSION LINE

☐ NA

Name or designation: _____

SW ☐ GW ☐

Point of origin: _____

Point of termination: _____

Approximate Length: _____

Material: _____

Are there any service connections off the raw water transmission line? @ ☐ Yes ☐ No _____
(Check yes only if the water system provides treated water to the rest of the distribution system)

What does each connection serve? _____

If used for potable water supply, is there a legal agreement or contract in place? ☐ Yes ☐ No _____

If used for potable water supply, is the water treated at the connection and how? ☐ Yes ☐ No _____

Name or designation: _____

SW ☐ GW ☐

Point of origin: _____

Point of termination: _____

Approximate Length? _____

Material: _____

Are there any service connections off the raw water transmission line? @ ☐ Yes ☐ No _____
(Check yes only if the water system provides treated water to the rest of the distribution system)

What does each connection serve? _____

If used for potable water supply, is there a legal agreement or contract in place? ☐ Yes ☐ No _____

If used for potable water supply, is the water treated at the connection and how? ☐ Yes ☐ No _____

DISTRIBUTION BOOSTER PUMP STATIONS

☐ NA

Location of the pump station: _____

How many pumps at the facility? _____

Type of pumps: _____

	Yes	No	NA	
Are the correct types of lubricants (NSF-60) used?	☐	☐	☐	_____
Is the pump station subject to flooding? @	☐	☐	☐	_____
Are pumps operable and in good condition?	☐	☐	☐	_____
Is there a maintenance program in operation?	☐	☐	☐	_____
Are spare parts available?	☐	☐	☐	_____
Is emergency power available?	☐	☐	☐	_____

HYDROPNEUMATIC TANKS

☐ NA

Type of Tanks ☐ Captive Air Bladder Tank

☐ Pressure Tank that uses an air compressor

Number of tanks: _____

Location, Description: _____

Dates put into service: _____

Is there an operable pressure gauge?	☐ Yes	☐ No
Is there evidence of severe rust? @	☐ Yes	☐ No
Is there evidence of water leaks? @	☐ Yes	☐ No
Is there evidence of air leaks? @	☐ Yes	☐ No
Is there evidence of flooding (if in a vault)? @ ☐ NA	☐ Yes	☐ No
Is there a pressure relief valve?	☐ Yes	☐ No
Can tank(s) be by-passed for repair?	☐ Yes	☐ No
For any tank that uses an air compressor, is the tank age older than the life expectancy? @ (Manufacturer and model number) _____	☐ Yes	☐ No

Comments: _____

GRAVITY TANKS

☐ NA

Complete for all tanks at ground water systems and consecutive systems. Also complete for finished water tanks at surface water / GWUDI systems. (Includes indoor clearwells and contact tanks or other finished water tanks.)			
Tank Name:	____	____	____
Tank ID (from PWS inventory, e.g., ST01):	____	____	____
Tank owner (if different than system owner):	____	____	____
Location (indoor or outdoor):	____	____	____
Date put into service	____	____	____
Tank Type — Below ground (buried or partially buried) / Ground level / Elevated (pedestal or standpipe)	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Tank is constructed of: — Concrete / Steel / Fiberglass / Other	☐ ☐ ☐ ____	☐ ☐ ☐ ____	☐ ☐ ☐ ____
What type of water is stored (GW systems only)?	☐ Treated ☐ Raw	☐ Treated ☐ Raw	☐ Treated ☐ Raw
Storage volume (gallons)?	____	____	____
Are there any approved WY DEQ Chapter 12 variances for this tank? If yes, describe what type of variance was approved.	☐ Yes ☐ No ____	☐ Yes ☐ No ____	☐ Yes ☐ No ____
Is the site subject to flooding? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Can the tank be isolated from the system?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the water level indicator accurate?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the tank appear structurally sound? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the foundation appear structurally sound? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Are there any unprotected openings in the tank (breaches, leaks, etc)? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Inspection and cleaning history			
If the tank is more than 10 years old, was it cleaned and inspected within the last 10 years? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
When and how was the tank last cleaned and inspected?	____	____	____
Who performed the cleaning and inspection?	____	____	____
How was the tank disinfected after cleaning? (NA if diver used)	____	____	____
Surveyor able to view report and confirm date?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If yes, note major concerns and/or recommendations:	____	____	____
If Carcasses or other debris found in the tank:			
Was EPA notified immediately?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Was the entry point for the carcass or debris eliminated?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Describe:	____	____	____
Overflow			
Does the tank have an overflow separate from the vent? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the overflow accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Overflow has a #24 mesh screen OR a duckbill valve OR a properly sealed flapper valve with screen inside (EPA recommends non-corrodible #24 mesh screen)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the overflow line terminate no less than 12 inches but no more than 24 inches above the ground surface? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the overflow discharge over an inlet structure, splash plate, or engineered rip-rap? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the discharge visible?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA

Complete for all tanks at ground water systems and consecutive systems. Also complete for finished water tanks at surface water / GWUDI systems. (Includes indoor clearwells and contact tanks or other finished water tanks.)			
Tank Name:	_____	_____	_____
Does the overflow have an air gap of 3 or more pipe diameters above the entrance to any storm or sanitary sewer? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about overflow:	_____	_____	_____
Drain Line			
Combined overflow and drain pipe? (If yes, skip drain questions)	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the drain accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is there #24 mesh screen on the drain pipe?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does water accumulate in the drain discharge area?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the drain pipe have an air gap of 3 or more pipe diameters above the entrance to any storm or sanitary sewer? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the drain pipe terminate between 12 and 24 inches above a drainage area?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the drain pipe terminate above an inlet structure, splash plate, or engineered rip-rap?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about drain:	_____	_____	_____
Air Vent			
Does the tank have a vent separate from the overflow? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the vent accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
For above ground tanks (ground level or elevated/standpipe):			
Is there #24 mesh screen? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
If not #24 mesh screen, what size mesh is the screen?	_____	_____	_____
Does the tank have a vacuum/pressure relief valve or other mechanism to prevent tank damage?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the screen on the inside of the vent pipe to discourage vandalism?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Downturned vent: Is the vent at least 24" above the roof? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
For non-downturned vents: Is there a solid cover down to the bottom of the vent screen? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
For non-downturned vents: Is the screen at least 8" above the roof surface? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Below Ground Tanks (buried or partially buried)			
Is air vent covered with #24 mesh screen? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the screen on the inside of the vent pipe to discourage vandalism?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the air vent terminate downward? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the air vent at least 24" above the roof or ground surface (whichever is higher)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about air vent:	_____	_____	_____
Access Hatch			
Is the hatch accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the hatch raised at least 24" above the roof or ground (whichever is higher) on below ground tanks (buried or partially buried) or 4" above the roof for above ground tanks (ground level or elevated)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
What is the height of the access hatch above the roof or ground surface?	_____ in	_____ in	_____ in
Does the hatch have a shoe box cover? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the hatch cover tight and sealed with a rubber gasket? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA

Complete for all tanks at ground water systems and consecutive systems. Also complete for finished water tanks at surface water / GWUDI systems. (Includes indoor clearwells and contact tanks or other finished water tanks.)			
Tank Name:	____	____	____
Is the hatch cover locked? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about access hatch:	____	____	____
Comments:	____	____	____

GRAVITY TANKS

☐ NA

Complete for all tanks at ground water systems and consecutive systems Also complete for finished water tanks at surface water / GWUDI systems. (Includes indoor clearwells and contact tanks or other finished water tanks.)			
Tank Name:	____	____	____
Tank ID (from PWS inventory, e.g., ST01):	____	____	____
Tank owner (if different than system owner):	____	____	____
Location (indoor or outdoor):	____	____	____
Date put into service	____	____	____
Tank Type — Below ground (buried or partially buried); Ground level; Elevated (pedestal or standpipe)	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Tank is constructed of: — Concrete; Steel; Fiberglass; Other	☐ ☐ ☐ ____	☐ ☐ ☐ ____	☐ ☐ ☐ ____
What type of water is stored (GW systems only)?	☐ Treated ☐ Raw	☐ Treated ☐ Raw	☐ Treated ☐ Raw
Storage Volume (gallons)?	____	____	____
Are there any approved WY DEQ Chapter 12 variances for this tank? If yes, describe what type of variance was approved.	☐ Yes ☐ No ____	☐ Yes ☐ No ____	☐ Yes ☐ No ____
Is the site subject to flooding? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Can the tank be isolated from the system?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the water level indicator accurate?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the tank appear structurally sound? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the foundation appear structurally sound? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Are there any unprotected openings in the tank (breaches, leaks, etc)? @	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Inspection and cleaning history			
If the tank is more than 10 years old, was it cleaned and inspected within the last 10 years? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
When and how was the tank last cleaned and inspected?	____	____	____
Who performed the cleaning and inspection?	____	____	____
How was the tank disinfected after cleaning? (NA if diver used)	____	____	____
Surveyor able to view report and confirm date?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If yes note major concerns and/or recommendations:	____	____	____
If Carcasses or other debris found in the tank:			
Was EPA notified immediately?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Was the entry point for the carcass or debris eliminated?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Describe:	____	____	____
Overflow			
Does the tank have an overflow separate from the vent? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the overflow accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Overflow has a #24 mesh screen OR a duckbill valve OR a properly sealed flapper valve with screen inside (EPA recommends a #24 mesh screen)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the overflow line terminate no less than 12 inches but no more than 24 inches above the ground surface? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the overflow discharge over an inlet structure, splash plate, or engineered rip-rap? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the discharge visible?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA

Complete for all tanks at ground water systems and consecutive systems Also complete for finished water tanks at surface water / GWUDI systems. (Includes indoor clearwells and contact tanks or other finished water tanks.)			
Tank Name:	_____	_____	_____
Does the overflow have an air gap of 3 or more pipe diameters above the entrance to any storm or sanitary sewer? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about overflow:	_____	_____	_____
Drain Line			
Combined overflow and drain pipe? (If yes, skip drain questions)	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the drain accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is there #24 mesh screen on the drain pipe?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does water accumulate in the drain discharge area?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the drain pipe have an air gap of 3 or more pipe diameters above the entrance to any storm or sanitary sewer? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the drain pipe terminate between 12 and 24 inches above a drainage area?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the drain pipe terminate above an inlet structure, splash plate, or engineered rip-rap?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about drain:	_____	_____	_____
Air Vent			
Does the tank have a vent separate from the overflow? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the vent accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
For above ground tanks (ground level or elevated/standpipe):			
Is there #24 mesh screen? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
If not #24 mesh screen, what size mesh is the screen?	_____	_____	_____
Does the tank have a vacuum/pressure relief valve or other mechanism to prevent tank damage?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the screen on the inside of the vent pipe to discourage vandalism?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Downturned vent: Is the vent at least 24" above the roof? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
For non-downturned vents: Is there a solid cover down to the bottom of the vent screen? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
For non-downturned ventsis the screen at least 8" above the roof surface? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Below Ground Tanks (buried or partially buried)			
Is air vent covered with #24 mesh screen? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the screen on the inside of the vent pipe to discourage vandalism?	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Does the air vent terminate downward@	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the air vent at least 24" above the roof or ground surface (whichever is higher)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about air vent:	_____	_____	_____
Access Hatch			
Is the hatch accessible for inspection? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the hatch raised at least 24" above the roof or ground (whichever is higher) on below ground tanks (buried or partially buried) or 4" above the roof for above ground tanks (ground level or elevated)? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
What is the height of the access hatch above the roof or ground surface?	_____ in	_____ in	_____ in
Does the hatch have a shoe box cover? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Is the hatch cover tight and sealed with a rubber gasket? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA

Complete for all tanks at ground water systems and consecutive systems Also complete for finished water tanks at surface water / GWUDI systems. (Includes indoor clearwells and contact tanks or other finished water tanks.)			
Tank Name:	____	____	____
Is the hatch cover locked? @	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA	☐ Yes ☐ No ☐ NA
Comments about access hatch:	____	____	____
Comments:	____	____	____

WATER TREATMENT DATA
GROUNDWATER and CONSECUTIVE SYSTEMS THAT HAVE AVAILABLE TREATMENT

☐ NA

Describe the steps (as many as necessary) of the treatment process in order from the water source to distribution: _____

Plant Output (gal/day)

Design: _____

Maximum: _____

Any changes to treatment since the last sanitary survey? ☐ Yes ☐ No

Describe: _____

	Step 1	Step 2	Step 3	Step 4
Process	☐ Chemical Type: _____ ☐ NSF 60 Certified? ☐ UV ☐ Filtration ☐ Ion exchange ☐ Softener ☐ Other: _____ Dosage: _____	☐ Chemical Type: _____ ☐ NSF 60 Certified? ☐ UV ☐ Filtration ☐ Ion exchange ☐ Softener ☐ Other: _____ Dosage: _____	☐ Chemical Type: _____ ☐ NSF 60 Certified? ☐ UV ☐ Filtration ☐ Ion exchange ☐ Softener ☐ Other: _____ Dosage: _____	☐ Chemical Type: _____ ☐ NSF 60 Certified? ☐ UV ☐ Filtration ☐ Ion exchange ☐ Softener ☐ Other: _____ Dosage: _____
Objective:	☐ Treatment of bacteria, viruses ☐ Turbidity removal ☐ Hardness removal ☐ Taste & odor removal ☐ Metals removal ☐ Other: _____	☐ Treatment of bacteria, viruses ☐ Turbidity removal ☐ Hardness removal ☐ Taste & odor removal ☐ Metals removal ☐ Other: _____	☐ Treatment of bacteria, viruses ☐ Turbidity removal ☐ Hardness removal ☐ Taste & odor removal ☐ Metals removal ☐ Other: _____	☐ Treatment of bacteria, viruses ☐ Turbidity removal ☐ Hardness removal ☐ Taste & odor removal ☐ Metals removal ☐ Other: _____
Is this process required by EPA?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Location of process?	☐ At Well ☐ At Treatment Plant ☐ Other: _____	☐ At Well ☐ At Treatment Plant ☐ Other: _____	☐ At Well ☐ At Treatment Plant ☐ Other: _____	☐ At Well ☐ At Treatment Plant ☐ Other: _____
Is this process adequate to meet the objective?	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____
Frequency of use:	☐ Permanent ☐ Seasonal ☐ Emergency ☐ Other: _____	☐ Permanent ☐ Seasonal ☐ Emergency ☐ Other: _____	☐ Permanent ☐ Seasonal ☐ Emergency ☐ Other: _____	☐ Permanent ☐ Seasonal ☐ Emergency ☐ Other: _____
Redundant Equipment?	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____
Backup power?	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____	☐ Yes ☐ No Explain: _____

Groundwater and Consecutive Systems
UV Disinfection

Yes	No	
☐	☐	Is there a flow meter to monitor/alarm or a flow restrictor valve so the max flow rate is not exceeded? Describe how the system ensures the flow does not exceed max flow rate: _____
☐	☐	Is there an intensity sensor and alarm (visible/audible) to indicate low intensity?
☐	☐	Is there a UV lamp status alarm (visible/audible) to indicate lamps off?
☐	☐	Is there a UV lamp age counter/alarm?
☐	☐	Is there an automatic shut-off fail-safe solenoid valve so that water does not flow through the unit without adequate treatment?
☐	☐	Are there spare bulbs on hand?

How often are the unit cleaned and the bulbs changed? _____

Point of use Treatment

For PWSs with required Point of Use (POU) treatment, ask the operator –

Yes	No	NA	
☐	☐	☐	Is the system adhering to the O&M Plan approved by EPA and conducting maintenance per the manufacturer's recommendations?
			(i.e. Is the operator replacing POU filters in accordance with the maintenance plan or manufacturer recommendations).
☐	☐	☐	Is the system following its EPA-approved POU sampling plan?

If No, explain any difficulties: _____
Comments: _____

WATER TREATMENT DATA
SURFACE WATER / GWUDISW SYSTEMS

☐ NA

General Information

For each treatment plant indicated on the overall PWS schematic, update the separate treatment plant schematic. Show all treatment processes, recycle streams, turbidimeter locations, raw water and finished water sampling points, and disinfectant residual sampling points.

In this section, the ¥ symbol indicates a potential violation to be determined by the EPA Rule Manager

Plant Location and Information

Plant / Office Location and Directions: _____

Date plant put online: _____

Modifications since the last survey? (if yes, describe): _____

Describe water sources treated by this plant: _____

Is treatment impacted by algae (describe)? _____

Plant Output (gal / day)

Design: _____

Summer Average: _____

Winter Average: _____

Maximum: _____

Provide a brief description of the plant's treatment processes: _____

Indicate all points in the treatment process where flow is determined and describe how (i.e. flowmeters, flow restrictors, valves, etc): _____

Please indicate all of the treatment plant waste disposal methods the plant currently employs:

- ☐ Discharge to surface, sewer, or equivalent. Please describe: _____
- ☐ On-site disposal. Please describe: _____
- ☐ Land application
- ☐ Discharge to lagoon/drying bed, with no recovery/recycling – e.g., downstream outfall
- ☐ Backwash recovery/recycling: discharge to basin or lagoon and then to source
- ☐ Backwash recovery/recycling: discharge to basin or lagoon and then to plant intake
- ☐ Other. Please describe: _____
- ☐ No wastes generated

Pre-Filtration Processes

Pre-Sed Basin: ☐ Yes ☐ No
Describe Type and indicate volume: _____
Chemicals added: ☐ Yes ☐ No (If yes, input chemical information in table below)

Rapid Mix: ☐ Yes ☐ No
Describe Type: _____
Chemicals added: ☐ Yes ☐ No (If yes, input chemical information in table below)

Flocculation: ☐ Yes ☐ No
Describe Type: _____
Chemicals added: ☐ Yes ☐ No (If yes, input chemical information in table below)

Sedimentation: ☐ Yes ☐ No
Describe Type: _____
Chemicals added: ☐ Yes ☐ No (If yes, input chemical information in table below)

Other: ☐ Yes ☐ No
Describe: _____
Chemicals added: ☐ Yes ☐ No (If yes, input chemical information in table below)

Chemical Information (ask system to provide information from chemical supplier / manufacturer):

Manufacturer	Product Name	Location Chemical Added	Max Dose Used (past 12 months):	NSF 60 Certified?	NSF 60 Max Allowable Dose
_____	_____	_____	_____	☐ Yes ☐ No	_____
_____	_____	_____	_____	☐ Yes ☐ No	_____
_____	_____	_____	_____	☐ Yes ☐ No	_____
_____	_____	_____	_____	☐ Yes ☐ No	_____
_____	_____	_____	_____	☐ Yes ☐ No	_____

NSF 60 certification and max. allowable dose info. can be found at: http://info.nsf.org/Certified/PwsChemicals/

Does the system use a chemical containing epichlorohydrin or polyacrylamide that is dosed in excess of the NSF 60 Max Allowable Dose? ¥
☐ Yes ☐ No

Filtration Processes

General

Indicate all types of filtration used:

☐ Conventional ☐ Bags / Cartridges ☐ Slow Sand
☐ Direct ☐ Membranes ☐ Diatomaceous Earth

Which is the final filtration barrier?: _____

Type and model # of combined filter effluent (CFE) turbidimeter: _____

Location of CFE turbidimeter: _____

Frequency of all turbidimeter calibration(s): _____

Date(s) of last turbidimeter calibration(s) for all turbidimeters: _____

Method used for all calibrations (primary formazin standard or other)? _____

Yes	No	
☐	☐	Does the location of the CFE turbidimeter comply with EPA policy SWTR #5? @
☐	☐	Are turbidimeters calibrated at least once every quarter? @
☐	☐	Does the system use a primary standard to perform the calibration? @
☐	☐	Are CFE turbidity records available for the last 5 years? ¥
☐	☐	Can CFE turbidities be recorded up to 5 NTU? @ How high can they be recorded: _____
☐	☐	Can turbidities associated with off-periods (backwash, FTW) be identified so they are not counted for compliance? (if applicable) @

Finished water CFE turbidity (NTU): PWS measurement: _____ Surveyor measurement: _____

Conventional and Direct Filtration

Filter Information

# of filters: _____

Type of filters:

☐ open to atmosphere ☐ enclosed (pressure)

Manufacturer name & model (if applicable): _____

Depth of each media (in):

Sand: _____ Anthracite: _____ Garnet: _____

Total at least 24"? @ Yes ☐ No ☐

Has operator observed loss of media? _____

Has the operator inspected the media for mudball formation? _____

Average length of filter run (hours): _____

Maximum filter loading rate (gpm/ft^2): _____

Is the filtration rate less than 2 gpm/sf (mono-media), 4 gpm/sf (dual media) or 6 gpm/sf (deep bed)? @

☐ Yes ☐ No

Backwash Information

What determines when backwash occurs? _____

Backwash rate (gpm/ft^2): _____

What is used for a backwash?

☐ Air scour ☐ finished water ☐ raw water @

Yes	No	
☐	☐	System starts up with clean filters (if not running 24/7)
☐	☐	System performs filter to waste (FTW) before putting filters back on line.

Conventional and Direct IFE and CFE additional information (only if final barrier)

IFE Questions

How are IFE records maintained? ☐ SCADA ☐ strip chart ☐ circular chart

Yes	No	
☐	☐	Does each filter have an individual effluent (IFE) turbidimeter? ¥ Types and model #s: _____
☐	☐	Are there alarms on each filter? Alarm set point (NTU): _____
☐	☐	Are IFE turbidities measured continuously, and recorded at least every 15 Minutes? ¥
☐	☐	Is IFE turbidity recorder (SCADA or charts) calibrated to record turbidities ≥ 2 NTU? @
☐	☐	Are IFE records kept for the last 3 years (as applicable)? ¥
☐	☐	Did any single filter IFE exceed 1.0 NTU in 2 consecutive 15 minute readings during the last 12 months? If yes, Indicate dates of all occurrences and copy those records. _____
☐	☐	a. If so, did they report to EPA and do a filter profile, if required? ¥
☐	☐	b. If this occurred 3 months in a row, did they conduct a filter self-assessment? ¥
☐	☐	Did any single filter IFE exceed 2.0 NTU in 2 consecutive 15 minute readings in the last 12 months? Indicate dates of all occurrences and copy those records. _____
☐	☐	a. If this occurred 2 months in a row for the same filter, did they report to EPA and have a CPE performed? ¥
☐	☐	For systems serving ≥ 10,000, did the IFE of any filter exceed 0.5 NTU in 2 consecutive 15 minute readings after being online 4 hours (following backwash or other reason offline) in the last 12 months? Indicate dates of all occurrences and copy those records.
☐	☐	a. If so, did they report to EPA and do a filter profile, if required? ¥

CFE Questions

How are CFE records maintained? ☐ SCADA ☐ strip chart ☐ circular chart

Yes	No	
☐	☐	Based on these records, has the system consistently met the CFE turbidity requirements for this type of filtration during the last 12 months? ¥ (0.3 NTU 95% of each month, 1 NTU max) If no, indicate date of all occurrences and copy those records: _____

Log removal credited for this type of filtration barrier for: *Giardia*: _____ Viruses: _____ Cryptosporidium: _____

Conventional and Direct (only if filter backwash, thickener supernatant, or sludge dewatering liquid is recycled)

Describe where recycle enters treatment process: _____

Yes	No	
☐	☐	Is recycle location before the TOC monitoring point?
☐	☐	Are records of recycle practices kept in an acceptable format for each year that includes all of the required elements (e.g., avg and max times/flows of backwashes; recycle treatment/equalization [chemical addition; hydraulic loading rates])? ¥

Membranes

Number of membrane skids: _____ Configuration: ☐ parallel ☐ series

Membrane type: ☐ microfiltration ☐ ultrafiltration ☐ nanofiltration ☐ RO

Manufacturer: _____ Model #: _____ Absolute pore size: _____

Each skid capacity (gpm): _____

Yes	No	
☐	☐	Has the PWS consistently been meeting the CFE turbidity requirements for this type of filtration? (0.3 NTU 95% of each month, 1 NTU max) ¥
☐	☐	Are direct integrity tests (DIT) performed at least daily (specify ☐ pressure or ☐ vacuum applied)? ¥ If yes, how often? ¥ _____
☐	☐	For continuous indirect integrity testing, does each unit/skid have its own online turbidimeter? ¥
☐	☐	a. Is filtrate turbidity monitored continuously and recorded at least once every15 minutes? ¥
☐	☐	b. Is it set with a trigger level of 0.15 NTU for > 15 minutes (a DIT should be initiated when filtrate turbidity exceeds this level)? ¥
☐	☐	Do operators know how to check and repair membranes when a DIT fails? @

How/when are membranes cleaned? _____

Are spare membrane cassettes available? ☐ Yes ☐ No

Is there adequate storage of cleaning chemicals in case of emergency weather? _____

Log removal credited for this type of filtration barrier for: *Giardia*: _____ Viruses: _____ Cryptosporidium: _____

Bags / Cartridges

Number of parallel filter trains: _____ Each train capacity (gpm): _____

Pre Filter (if applicable)

Housing: Manufacturer: _____ Model: _____

Bag / Cartridge Filter: Manufacturer: _____ Model: _____ # per housing: _____

Final Filter

Housing: Manufacturer: _____ Model: _____

Bag / Cartridge Filter: Manufacturer: _____ Model: _____ # per housing: _____

Manufacturer's recommended maximum flow rate (gpm): _____

Pore size rating (microns - indicate absolute or nominal): _____

Replacement frequency of all filters: _____

Yes	No	
☐	☐	Has the PWS consistently been meeting the CFE turbidity requirements for this type of filtration? (1 NTU 95% of each month, 5 NTU max) ¥
☐	☐	Are there working pressure gauges before and after filters? @
☐	☐	Does the PWS keep daily records of monitoring the pressure drop across the filters, and know when to change out filters? @
☐	☐	Has the final filter or pre/final filter combination been demonstrated to remove at least 99.9% of *Cryptosporidium* or equivalent size particles or have a 1 or 2 micron absolute pore size rating? (leave blank if unknown) @
☐	☐	Does the flow rate through the final filter exceed the manufacturer's maximum recommended flow rate? @

Log removal credited for this type of filtration barrier for: *Giardia*: _____ Viruses: _____ Cryptosporidium: _____

Diatomaceous Earth Filters

Number of filters: _____ ☐ Pressure System ☐ Vacuum System

Filter manufacturer/model # (if applicable): _____

Each filter capacity (gpm): _____

Describe pre-coat and body feed systems: _____

Has the PWS consistently been meeting the CFE turbidity requirements for this type of filtration? (1 NTU 95% of each month, 5 NTU max) ¥
☐ Yes ☐ No

Describe precoat and body feed systems: _____

Maximum filter loading rate (gpm/ft^2): _____

Is the filtration rate less than 1.5 gpm/sf? @ ☐ Yes ☐ No

Maximum head loss allowed: _____

What determines when backwash occurs? ☐ time ☐ turbidity ☐ automatic ☐ head loss

Log removal credited for this type of filtration barrier for: *Giardia*: _____ Viruses: _____ Cryptosporidium: _____

Slow Sand Filtration

Number of filters: _____ Each Filter capacity (gpm): _____

What is rate of filtration (gpm/ft)? _____

Is the filtration rate less than 0.1 gpm/sf? @ ☐ Yes ☐ No

Yes	No	
☐	☐	Has the PWS consistently been meeting the CFE turbidity requirements for this type of filtration? (1 NTU 95% of each month, 5 NTU max) ¥
☐	☐	Is turbidity of raw water to filters always <10 NTU? @
☐	☐	Is water depth over sand at least 3 feet during operation? @
☐	☐	Can plant meet design capacity with one unit out of service?
☐	☐	Do they ripen after scraping (filter to waste) and how long?
☐	☐	Is head loss across filters monitored and used for process control? @ If yes, how is the head loss monitored? _____

How often is each unit scraped? _____

Log removal credited for this type of filtration barrier for: *Giardia*: _____ Viruses: _____ Cryptosporidium: _____

Disinfection Processes

General

Describe all inactivation processes, **both pre-filtration and post-filtration:** _____

UV Disinfection

Point of application: _____ UV manufacturer/model #: _____

Validated maximum flow (gpm): _____ Validated UV dosage (mJ/cm^2): _____

Log inactivation credited based upon validated dosage (use table below): *Giardia*: _____ Cryptosporidium: _____

Table 1. UV Dose Requirements in Millijoules per Square Centimeter (mJ/cm^2)

Target Pathogen	Log Inactivation							
	0.5	**1.0**	**1.5**	**2.0**	**2.5**	**3.0**	**3.5**	**4.0**
Cryptosporidium	1.6	2.5	3.9	5.8	8.5	12	15	22
Giardia	1.5	2.1	3.0	5.2	7.7	11	15	22
Viruses	**	**	**	**	**	**	**	**

Source: 40 CFR 141.720(d)

** UV not credited with virus inactivation by EPA P8 for SW/GU systems

Yes	No	
☐	☐	Does PWS keep records of UV reports sent monthly to EPA? ¥
☐	☐	Does public water system's Emergency Response Plan address breakage of UV lamps? (Mercury hazard: OSHA guidelines 1910 Subparts H, I, Z, Response to breakage, Cleanup and disposal)

UV Disinfection – less than 40 gpm

Yes	No	
☐	☐	Is there a flow meter to monitor/alarm or a flow restrictor valve so the max flow rate is not exceeded? @ Describe how the system ensures the flow does not exceed max flow rate: _____
☐	☐	Is there an intensity sensor and alarm (visible/audible) to indicate low intensity? @
☐	☐	Is there a UV lamp status alarm (visible/audible) to indicate lamps off? @
☐	☐	Is there a UV lamp age counter/alarm? @
☐	☐	Is there an automatic shut-off fail-safe solenoid valve so that water does not flow through the unit without adequate treatment? @
☐	☐	Does this UV unit have an NSF Standard 55A Certification or has it been validated according to the requirements of the 2006 UV Disinfection Guidance Manual? ¥ (leave blank if unknown)
☐	☐	Are there spare bulbs on hand?

How often is the unit cleaned and the bulbs changed? _____

UV Disinfection – greater than 40 gpm

How is unit monitored? ☐ Intensity Setpoint Method ☐ Calculated Dose Method

Yes	No	
☐	☐	Is the calibration of the UV intensity sensors checked at least monthly using a reference sensor? @ How frequently are calibration checks performed? _____
☐	☐	Is the calibration of the UV transmittance analyzer checked at least weekly with a benchtop analyzer (Calculated Dose Method only)? @ How frequently are calibration checks performed? _____
☐	☐	Is there a calibrated flowmeter to ensure max flow rate is not exceeded? @
☐	☐	Are daily operational records kept of flow rates/production, run time, lamp status, UV intensity, UVT and UV dosage? ¥ (These should be monitored continuously and recorded at least once/4 hours. Small systems (less than 500 population) are allowed to record one time each day.)
☐	☐	Does the operator know how to identify an off-specification event and report it to the EPA? @
☐	☐	Does the system alarm when an off-specification event occurs? @
☐	☐	Are there spare bulbs on hand?

Chemical Disinfection

Chlorine and Chloramines

Type: _____ Dosage: _____ (lb / day or mg/L) NSF 60 Certified? ☐ Yes ☐ No

Point of application: _____

Where does the PWS measure disinfectant residual for compliance with the SWTR requirement of ≥ 0.2 mg/L at the POE? _____

Is this before the 1st user of the water? ¥ ☐ Yes ☐ No

How is residual measured? ☐ continuous ☐ grab Equipment / manufacturer model #: _____

What type of measurement is taken? ☐ free ☐ total (systems that use chloramination must measure total)

Chlorine residual at POE (mg/L): PWS measurement: _____ Surveyor measurement: _____

Are the two measurements within 0.1 mg/L or 15% of one another (whichever is larger)? @ ☐ Yes ☐ No

Yes	No	
☐	☐	Is there redundant disinfection equipment?
☐	☐	Is there emergency power for the disinfection equipment?
☐	☐	If measuring residual continuously, is the PWS conducting weekly verifications with a grab sample measurement? @

Ozone

Number of Ozone generators: _____ Percent ozone being generated (%): _____

Where is the ozone applied? _____ Where is residual measured? _____

Ozone residual (%): _____ Ozone residual (mg/L): _____

Describe the purpose of the ozone addition: _____

Are all applicable residual monitors operational? _____

Are excess ozone destructors operational? _____

Is there a preventive maintenance program for the generators? _____

Is a SCBA or supplied-air respirator available for the operators when working with ozone? _____

Are operators exposed to ozone levels above 0.1 mg/L? _____

Does the system monitor bromate concentration at point of entry? ¥ ☐ Yes ☐ No

Chlorine Dioxide

Number of Chlorine Dioxide generators: _____

Where is the Chlorine Dioxide applied? _____ Where is Chlorine Dioxide residual measured? _____

Chlorine Dioxide residual (mg/L): _____

Describe the purpose of the Chlorine Dioxide addition: _____

Are all applicable residual monitors operational? _____

Is there a preventive maintenance program for the generators? _____

Are operators exposed to Chlorine Dioxide levels above 0.1 ppm? _____

Yes	No	
☐	☐	Does the system monitor chlorine dioxide daily at point of entry? ¥
☐	☐	Does the system monitor chlorite at point of entry daily and monthly in the distribution system? ¥

Chemical Disinfection – Inactivation Calculations

If the PWS performs ongoing daily or weekly CT calculations, use their actual data to document inactivation in the section below. Otherwise, do a conservative calculation for each inactivation segment.

Identify location of 1st user: _____

Summer Calculations Lowest* disinfectant residual and where measured (mg/L): _____ Water temperature (lowest*): _____°C Water pH (highest*): _____ Maximum* flow through segment: _____gpm Describe each segment and list appropriate baffling factor: _____	List the volume of each segment using minimum* operating heights of tanks: _____ Total logs *Giardia* inactivation from all chemical disinfection segments: _____ Total logs virus inactivation from all chemical disinfection segments: _____
Winter Calculations Lowest* disinfectant residual and where measured (mg/L): _____ Water temperature (lowest*): _____°C Water pH (highest*): _____ Maximum* flow through segment: _____gpm Describe each segment and list appropriate baffling factor: _____	List the volume of each segment using minimum* operating height of tanks: _____ Total logs *Giardia* inactivation from all chemical disinfection segments: _____ Total logs virus inactivation from all chemical disinfection segments: _____

* Use data from system's ongoing CT calculations if available. Values should correlate to the system's lowest calculated inactivation levels during the specified season in the previous year.

Chemical Disinfection – Disinfection Profiling (if system is exempt, skip section)

Yes	No	
☐	☐	Does the system have a disinfection profile on site that contains a year of weekly log inactivation calculations (<10,000 pop.) or a year of daily log inactivation calculations (>10,000 pop)? @
☐	☐	Did the PWS make a significant change (new disinfectant; new location; etc.) to disinfection practices after 7/1/03 or 1/1/04?
☐	☐	If yes, was EPA consulted? Describe the change and date made: ¥ _____

When was the profile conducted? _____ to _____

Lowest monthly average log inactivation observed from the profile (month/value): *Giardia:* _____ Viruses: _____

Overall Inactivation / Removal Calculations

Viruses / Giardia

Viruses	***Giardia***
_____ Logs Removal (filtration)	_____ Logs Removal (filtration)
_____ Logs chemical inactivation (lowest value from Summer / Winter calculations)	_____ Logs chemical inactivation (lowest value from Summer / Winter calculations)
_____ Logs UV inactivation	_____ Logs UV inactivation
_____ Logs other removal or inactivation	_____ Logs other removal or inactivation
_____ Total logs inactivation / removal	_____ Total logs inactivation / removal
≥ 4 logs? @ ☐ Yes ☐ No	≥ 3 logs? @ ☐ Yes ☐ No

Cryptosporidium

Committed to install maximum treatment? ☐ Yes ☐ No

If no, what is the system's bin #? ☐ Bin #1 ☐ Bin #2 ☐ Bin #3 ☐ Bin #4

System Classification: ☐ Filtered ☐ Unfiltered

*If system completed sampling and was classified as a Bin #1 system, the section below does not need to be completed. For all other systems, please complete the section below.

Total logs Cryptosporidium inactivation / removal required based on max treatment, bin # or classification: _____

Date treatment required by: _____ Toolbox Components Utilized: _____

_____ Logs Removal (filtration)

_____ Logs chemical inactivation

_____ Logs UV inactivation

_____ Logs other Toolbox Components

_____ Total logs inactivation / removal

≥ required logs? ¥ ☐ Yes ☐ No

WATER TREATMENT DATA (FOR ALL SYSTEMS)
CORROSION CONTROL

Does this PWS add chemicals for corrosion control? ☐ Yes ☐ No

Comments: _____

Chemical added:	NSF 60 Certified?	Dosage at Treatment Plant	Added Continuously or Seasonally
_____	☐ Yes ☐ No	_____	☐ Continuously ☐ Seasonally
_____	☐ Yes ☐ No	_____	☐ Continuously ☐ Seasonally
_____	☐ Yes ☐ No	_____	☐ Continuously ☐ Seasonally
_____	☐ Yes ☐ No	_____	☐ Continuously ☐ Seasonally

Do you monitor corrosion control treatment chemical concentrations, pH or any other water quality parameters at the entry point to the distribution system or at customer taps to evaluate the process? ☐ Yes ☐ No

Comments: _____

DISTRIBUTION DATA

Please provide a brief description of the distribution system, including source to use piping: _____

What are the location and estimated linear feet of asbestos pipe in the distribution system? _____

Have lines broken due to freezing? ☐ Yes ☐ No _____
Have lines broken due to traffic load? ☐ Yes ☐ No _____

Are lines properly disinfected after repairs are made? @ ☐ Yes ☐ No _____

Is there at least 35 psi pressure in the distribution system at peak normal flow? ☐ Yes ☐ No _____

Is there at least 20 psi at all points in the system at all times? @ ☐ Yes ☐ No _____

For systems that provide water storage:

Total number of days of storage (Summer)? _____

Total number of days of storage (Winter)? _____

	Yes	No	NA
Is the storage capacity adequate to meet current needs?	☐	☐	☐
Is the storage capacity adequate to meet future needs?	☐	☐	☐

Comments: _____

Are there any bulk water supply/fill stations attached to this system? ☐ Yes ☐ No _____

(note to surveyor: if yes, check each facility, note its condition and provide photos)

Station name (if applicable)	Location	Appropriate Air Gap or RPZ?
_____	_____	☐ Air Gap ☐ RPZ ☐ Neither @
_____	_____	☐ Air Gap ☐ RPZ ☐ Neither @
_____	_____	☐ Air Gap ☐ RPZ ☐ Neither @

Comments: _____

Are there any air relief valves in vaults/pits located in the distribution system? ☐ Yes ☐ No _____

Note to surveyor: If yes, inspect one representative ARV, note its condition and provide photos

Are they regularly inspected and maintained? ☐ Yes ☐ No _____

Do any have leaks and/or standing water that covers the discharge point? @ ☐ Yes ☐ No _____

Location, length, number, and flushing frequency for dead ends in the system: _____

Are distribution system ("as-built") drawings maintained (e.g., revised to show replacement or repair?) ☐ Yes ☐ No _____

For systems that add a chemical disinfectant or receive disinfected water from a wholesaler: **NA** ☐

Yes	No	
☐	☐	Is test equipment available for measuring the chlorine residual in the distribution system? Describe equipment: _____
☐	☐	Are reagents up to date? _____
☐	☐	Does the operator know how to properly measure chlorine residual? _____

Measured chlorine residual distribution system location: _____

Indicate residual value measured at this distribution system location: By Surveyor: _____(mg/L) By PWS: _____(mg/L)

Indicate if free or total chlorine was measured: _____

It is recommended that a minimum residual of 0.5 mg/L total chlorine or 0.2 mg/L free chlorine be maintained.

CROSS CONNECTION CONTROL

Yes	No	NA	
☐	☐	☐	**Does each severe hazard connection** have the appropriate reduced pressure backflow assembly installed at the meter/service connection and approved air gap (twice the size of the supply pipe diameter but always greater than one inch)? Describe each severe hazard connection and its location. @ _____ Note: Severe hazard connections include radioactive materials processors, nuclear reactors, and sewage treatment plants/pump stations.
☐	☐	☐	**Does each high hazard connection** in the treatment plant or distribution system have the appropriate air gap or reduced pressure backflow assembly installed? Describe each high hazard connection and its location. @ _____ Note: High hazard connections include hospitals, medical/dental facilities, laboratories, mortuaries, large taxidermies, chemical suppliers/processing facilities, petroleum plants, food processing facilities, wastewater treatment plants, and docks, car washes, dry cleaners, direct connections to raw or non-potable water, and any service connection with an unapproved auxiliary supply.
☐	☐	☐	Do **trailers or mobile homes connected directly to the PWS** via a yard hydrant have a residential dual check valve at each connection? _____
☐	☐	☐	Are any **frost-free hydrants** that drain into the soil directly connected to this PWS? _____
☐	☐	☐	Are there any leaking system components in the water system observed by the surveyor that are not previously noted? @ Explain where and what was leaking: _____
☐	☐	☐	**At Community PWS**, do all low hazard connections have the appropriate dual check valve assemblies installed at the meter or service connection? _____ Note: Low hazard connections include mobile home parks, farms/dairies, ranches, and shopping centers.
			For Non-community Systems, do the following connections have the indicated type of backflow prevention assemblies?
☐	☐	☐	- Stock tanks – approved air gap or atmospheric vacuum breaker at the tank? @ _____
☐	☐	☐	- Threaded yard hydrants – pressure vacuum breaker, atmospheric vacuum breaker or double check valve assembly? _____
			Does the water supplier have a record keeping program and management procedures to ensure:
☐	☐	☐	- The installation and certification by test or inspection (as applicable) of all backflow preventers (BFPs) at new service connections _____
☐	☐	☐	- The annual certification by a certified tester of all high-hazard BFPs at service connections. _____

SAFETY

Personnel Safety

Yes	No	NA	
☐	☐	☐	Are all personnel trained in proper handling of all utilized chemicals and materials? _____
☐	☐	☐	Are adequate masks, protective clothing, and safety equipment provided? _____
☐	☐	☐	Does the operator understand relevant Occupational Safety and Health Administration (OSHA) regulations (e.g., confined space, hazard communication, trenching/shoring, lock out/tag out)? _____

Chlorine Gas Safety NA ☐

☐	☐	☐	Are there chlorine warnings posted on the outside of chlorine room doors? _____
☐	☐	☐	- Do the doors open outward? _____
☐	☐	☐	- Do they open to the exterior of the building? _____
☐	☐	☐	- Are chlorine room doors equipped with crash bars? _____
☐	☐	☐	- Are chlorine room doors equipped with viewports? _____
☐	☐	☐	Is there a leak detector in the chlorine room with an audible alarm? _____
☐	☐	☐	Are chlorine feed and storage areas isolated from other facilities? _____
☐	☐	☐	Are chlorine areas adequately ventilated? _____
☐	☐	☐	Are all chlorine cylinders adequately restrained? _____
☐	☐	☐	Are self-contained breathing apparatus (SCBA) available for use in chlorine emergencies? _____
☐	☐	☐	- Are they in good working condition? _____
☐	☐	☐	- Are water system personnel adequately trained in the use and maintenance of the SCBA? _____
			- Where are the SCBA stored? _____
☐	☐	☐	Are chlorine leak kits available and are all personnel trained in their proper use? _____

Chemical Safety NA ☐

Yes	No	NA	
☐	☐	☐	Are oxidizers, corrosives, and flammables stored in separate areas and in closed, marked containers? _____
☐	☐	☐	Are flammables stored in appropriate containers and cabinets away from combustion sources? _____
☐	☐	☐	Is there adequate ventilation in the areas where solvents, aerosols, and chemical feeders are in use? _____
☐	☐	☐	Are bulk storage areas physically isolated from treatment areas to prevent spills from entering treated or untreated water? _____
☐	☐	☐	Is the fire department familiar with the facilities and their contents? _____

MANAGEMENT DATA

Yes	No	NA	
☐	☐	☐	Are there rules governing new hookups to protect the integrity of this water system? _____
☐	☐	☐	Are DEQ construction standards followed? _____
☐	☐	☐	Is the treatment plant being properly operated to prevent inadequately treated water from being sent to the distribution system? @ _____
☐	☐	☐	Does the system have arrangements in place to assure prompt supply and repair service? _____
☐	☐	☐	Does the system have a current operations and maintenance manual which describes all procedures, equipment, sampling schedules and inspection data? _____
☐	☐	☐	Is there a schedule for routine preventative maintenance for all facilities and equipment? _____
☐	☐	☐	Does the system (treatment plant, finished water storage) have security measures in place (fencing, locks, lighting, alarms, etc.)? _____
☐	☐		Does the system have an emergency response plan (ERP) – system does not need to show the surveyor the ERP --that includes: @ _____
☐	☐		- Emergency contact phone numbers? _____
☐	☐		- Procedures to respond to a pressure loss/water outage? _____
☐	☐		- Procedures to respond to a water contamination incident? _____
☐	☐		- Is the ERP accessible to the operator on-site? _____
☐	☐		Is the system part of the state's WARN network? _____
☐	☐		Have you evaluated possible impacts to your system from extreme weather events? If yes, what was the outcome? _____
☐	☐		Are you interested in training on extreme weather events? _____
☐	☐		Have you evaluated your facilities to see if they are in the 100 and 500 year flood plains? _____ If yes, what was the outcome? _____
What percentage of the utility's power comes from your own renewable energy sources? _____ % wind: _____ % solar: _____ % hydro: _____			

MONITORING AND RECORDS

Revised Total Coliform Rule (RTCR) monitoring (all systems)

Yes	No	
☐	☐	Does the operator know how to collect samples for total coliform analysis? (Review operator sampling procedure at time of survey to confirm) _____
☐	☐	Does the operator know what to do in the event of a total coliform "unsafe" result? _____ They will need to take 3 repeat samples under the RTCR utilizing the regular lab form: For an explanation go to the EPA Region 8 Drinking Water Online website (http://www.epa.gov/region8-waterops) - "click" on **Revised Total Coliform Rule (RTCR)** (under Regulations and Compliance) - "click" on **Tech Tip: TC+ Follow Up** (in green box) - Follow the 5 steps described in the Tech Tip for follow up sampling after a TC+ sample
☐	☐	Are extra bottles available in case of need for repeat coliform sampling? _____
☐	☐	Does the system have an RTCR sampling plan on file and available for the surveyor's review? _____
☐	☐	Ask the operator - Is the system following their RTCR sampling plan? If No, explain any difficulties _____

If subject to the Ground Water Rule (GWR), does the operator know: NA ☐

Yes	No	NA	
☐	☐	☐	Within 24 hours of being notified of a *routine coliform* positive sample result, they must collect one triggered source water sample for *every* routine coliform positive sample at each active ground water source (e.g., three routine coliform positive samples requires the operator to collect three source water samples from *each* ground water source)? _____
			They will need to submit:
☐	☐	☐	- Source water sample results utilizing the triggered Ground Water Source Sampling Form located on the Drinking Water Online site (http://www.epa.gov/region8-waterops)? _____
☐	☐	☐	Where to sample if they are required to sample all of their active ground water sources? _____
☐	☐	☐	Are extra bottles available in case of the need for GWR source sampling? _____

For Community and NTNC systems (including consecutives): NA ☐

Yes	No	NA	
☐	☐	☐	Is there a Disinfection Byproducts Rule Monitoring Plan on-site available for the surveyor's review? _____
☐	☐	☐	- Is it up-to-date reflecting the current distribution system? _____
☐	☐	☐	- In the last 5 years, have water mains been extended to new service areas? _____
☐	☐	☐	- If Yes, did the total amount of new water mains exceed 2500 feet? _____
☐	☐	☐	Does the system have a Lead & Copper Tap Sample Site Plan on site and available for the surveyor's review? _____
☐	☐	☐	- Is it up to date? _____
☐	☐	☐	- Ask the operator - Is the system following their LCR Tap Sample Site Plan? If No, explain any difficulties _____

For All Systems:

Yes	No	NA	
☐	☐	☐	Does the operator know the location of each entry point to the distribution system? _____
☐	☐	☐	Does the operator know how to properly label samples taken from the entry points? _____
☐	☐	☐	Has the PWS completed the monitoring that is specified in the EPA-provided monitoring schedule so far for this calendar year? _____
☐	☐	☐	Are copies of all monitoring results filed and readily accessible? _____
☐	☐	☐	Is the operator familiar with the Drinking Water Online (http://www.epa.gov/region8-waterops) and Drinking Water Watch (https://sdwisr8.epa.gov/Region8DWW/JSP/loginForm.jsp) websites created for their benefit? _____

Environmental Protection Agency Region VIII
1595 Wynkoop Street (8P-W-DW)
Denver, Colorado 80202-2466
2017 Assessment of Ground Water Under the Direct Influence of Surface Water (GWUDISW)
(ONLY the first page is to be completed by surveyor;
FILL OUT unless this source is fully treated in a surface water treatment plant)

Public Water System Name: PWS#:

Well/Spring/Infiltration Gallery Name: Beartooth Campground #1 County:

WY SEO Permit #: WY DEQ Construction Permit #:

Date of Assessment: Field Assessor:

		Index Points	Score*
A	**TYPE OF SUBSURFACE WATER SOURCE (Highlight or Circle One)**		
	Spring	10	
	Infiltration Gallery more than 2 ft. deep	10	
	Infiltration Gallery at or less than 2 ft. deep	25	
B	**HYDROGEOLOGICAL FEATURES (Highlight or Circle)**		
	Surface runoff drains toward well, spring or infiltration gallery	15	
C	**STRUCTURAL FEATURES (Highlight or Circle)**		
	WELLS (includes wells collecting water from infiltration galleries)		
	Uncased or Unsealed (lacking annular seal) Well	40	
	Lack of watertight sanitary seal on well cap (including lack of watertight bolt holes, watertight pump support openings, watertight electrical cable openings, etc.)	15	
	Well height not properly terminated (well, including the pitless adapter units, does not terminate a minimum of 18 inches above the final ground level, 12 inches above the pump house floor or 3 feet above the highest known flood elevation, whichever is higher. Measurements should be taken from the pump house floor, not the bottom of a pit which may be located within the pump house)	15	
	SPRING COLLECTION BOX (includes collection vaults collecting water from infiltration galleries)		
	Deep-rooted vegetation (e.g. trees, shrubs) around spring box, providing conduit for surface water into spring water	15	
	Spring box is not watertight, with overlapping lid or cover	15	
	Overflows or drains open to atmosphere or allow entrance of animals (unscreened)	15	
	Marshy (standing water) around spring collection area	30	

GWUDISW Assessment, Continued (p. 2)
(Second page to be completed by EPA Region VIII)

PWSID #: Date: EPA Assessor:

		Index Points	Score*
D	**TYPE OF SUBSURFACE WATER SOURCE (Highlight or Circle one)**		
	Well, with depth to first screen or perforation equal to or greater than 50 feet	0	
	Well, with depth to first screen or perforation equal to or less than 50 feet	5	
E	**HISTORICAL MICROBIOLOGICAL CONTAMINATION (Highlight or Circle)**		
	History or suspected outbreak of Giardia or other pathogenic organisms associated with surface water with current system configuration	50	
	Record of Total Coliform (TC+) acute MCL violations over the last 3 years (these violations will be reported as "MCL (TCR), ACUTE)	30	
	Ground Water Rule triggered Source sample(s) over the last 3 years.		
	TC+ in source water: 1 TC+	20	
	2 TC+	25	
	3 TC+	30	
	e. Coli+ in source water	40	
	Regulatory agency verifies complaints about turbidity or suspected waterborne disease	10	
F	**HYDROGEOLOGICAL FEATURES (Highlight or Circle)**		
	Distance between a surface water source and the groundwater collector (vertical well, spring box or infiltration gallery)		
	Over 200 ft.	0	
	100 – 200 ft.	5	
	Less than 100 ft.	10	
	Well, spring or infiltration gallery located on floodplain at approximate altitude of stream	20	
	Source aquifer that is unconsolidated, cavernous, or fractured	15	
	TOTAL SCORE (**)		

(*) assign appropriate points even if the issue is not identified as a significant deficiency in the survey report

(**) total score of greater than or equal to 40 indicates further assessment is needed

COMMENTS:

ADDITIONAL NOTES

Environmental Protection Agency Region VIII
1595 Wynkoop Street (8P-W-DW)
Denver, Colorado 80202-2466
2017 Assessment of Ground Water Under the Direct Influence of Surface Water (GWUDISW)
(ONLY the first page is to be completed by surveyor;
FILL OUT unless this source is fully treated in a surface water treatment plant)

Public Water System Name: PWS#:

Well/Spring/Infiltration Gallery Name: Bearthooth Campground #2 County:

WY SEO Permit #: WY DEQ Construction Permit #:

Date of Assessment: Field Assessor:

		Index Points	Score*
A	**TYPE OF SUBSURFACE WATER SOURCE (Highlight or Circle One)**		
	Spring	10	
	Infiltration Gallery more than 2 ft. deep	10	
	Infiltration Gallery at or less than 2 ft. deep	25	
B	**HYDROGEOLOGICAL FEATURES (Highlight or Circle)**		
	Surface runoff drains toward well, spring or infiltration gallery	15	
C	**STRUCTURAL FEATURES (Highlight or Circle)**		
	WELLS (includes wells collecting water from infiltration galleries)		
	Uncased or Unsealed (lacking annular seal) Well	40	
	Lack of watertight sanitary seal on well cap (including lack of watertight bolt holes, watertight pump support openings, watertight electrical cable openings, etc.)	15	
	Well height not properly terminated (well, including the pitless adapter units, does not terminate a minimum of 18 inches above the final ground level, 12 inches above the pump house floor or 3 feet above the highest known flood elevation, whichever is higher. Measurements should be taken from the pump house floor, not the bottom of a pit which may be located within the pump house)	15	
	SPRING COLLECTION BOX (includes collection vaults collecting water from infiltration galleries)		
	Deep-rooted vegetation (e.g. trees, shrubs) around spring box, providing conduit for surface water into spring water	15	
	Spring box is not watertight, with overlapping lid or cover	15	
	Overflows or drains open to atmosphere or allow entrance of animals (unscreened)	15	
	Marshy (standing water) around spring collection area	30	

ADDITIONAL NOTES

GWUDISW Assessment, Continued (p. 2)
(Second page to be completed by EPA Region VIII)

PWSID #: Date: EPA Assessor:

		Index Points	Score*
D	**TYPE OF SUBSURFACE WATER SOURCE (Highlight or Circle one)**		
	Well, with depth to first screen or perforation equal to or greater than 50 feet	0	
	Well, with depth to first screen or perforation equal to or less than 50 feet	5	
E	**HISTORICAL MICROBIOLOGICAL CONTAMINATION (Highlight or Circle)**		
	History or suspected outbreak of Giardia or other pathogenic organisms associated with surface water with current system configuration	50	
	Record of Total Coliform (TC+) acute MCL violations over the last 3 years (these violations will be reported as "MCL (TCR), ACUTE)	30	
	Ground Water Rule triggered Source sample(s) over the last 3 years.		
	TC+ in source water: 1 TC+	20	
	2 TC+	25	
	3 TC+	30	
	e. Coli+ in source water	40	
	Regulatory agency verifies complaints about turbidity or suspected waterborne disease	10	
F	**HYDROGEOLOGICAL FEATURES (Highlight or Circle)**		
	Distance between a surface water source and the groundwater collector (vertical well, spring box or infiltration gallery)		
	Over 200 ft.	0	
	100 – 200 ft.	5	
	Less than 100 ft.	10	
	Well, spring or infiltration gallery located on floodplain at approximate altitude of stream	20	
	Source aquifer that is unconsolidated, cavernous, or fractured	15	
	TOTAL SCORE (**)		

(*) assign appropriate points even if the issue is not identified as a significant deficiency in the survey report

(**) total score of greater than or equal to 40 indicates further assessment is needed

ADDITIONAL NOTES

PWS Inventory

Entity: SHOSHONE NF BEARTOOTH LAKE **PWS** WY5680237 **Today is** 6/16/2017

Contact
Mr. TODD LEGLER

Address
203A Yellowstone Avenue
CODY WY 82414
307-527-6921
PARK County
E Mail tlegler@fs.fed.us

PWS Type	NC
Start and End Dates	7/1 9/30
Status and Date	A 5/1/1998
Source	GW
Pop Type Srvd, Count	80
Service Connections	RS 2
Required Bact	MN
Samples	2
Comments	Per J. Harris Email, Chg Season on Pop Served.11/02/2016.dr; Per BB, Corrected Pop Served Time Frames.01/14/2014.dr; Per SSR, 8/9/12,

Service Area ID #	Type	Category	Primary Service Area ?
5781	T	RECREATION AREA	Y

Source ID / Seller	Name / Longitude	Latitude	T	R	S	Type	Avail	Act	Rea	Rec # / Sec / qSec / qqSec / qqqSec
2538324	SHOSHONE NF BEARTOOTH LAKE CG					OT	P	I		*OTOLD
2538325	SHOSHONE NF BEARTOOTH LAKE CG					DS	P	A		DIST
2538957	HAND PUMP #1					PF	P	A		PF01
	-109.5882	44.945177								
2538959	HAND PUMP #2					PF	P	A		PF02
	-109.586131	44.94555								
2538323	~~WELL #1~~ Beartooth Campground #1					WL	P	A		WL01
	-109.5882	44.945177								
2538958	~~WELL #2~~ Beartooth Campground #2					WL	P	A		WL02

Why are we giving the wells a different name when they listed here? They are the same feature. KCH 7/26/17

Visit ID	Visit Date	Visit Reason	Inspector
1	7/10/2002	Sanitary Survey	OBERHOLTZER, MEL
2	9/4/2007	Sanitary Survey	SCHULTZ, DAVID
3	8/9/2012	Sanitary Survey	KAHLERT, JASON

Shoshone National Forest
Beartooth Lake Campground

PWS ID # 5680237
GW/NC

ADDITIONAL NOTES

Sample Points (SP) shown on the schematic are **ONLY** for Nitrates, RADs, IOCs, SOCs, and VOCs. If you sample for other contaminants, please refer to your individual Site Sampling or Monitoring Plans.

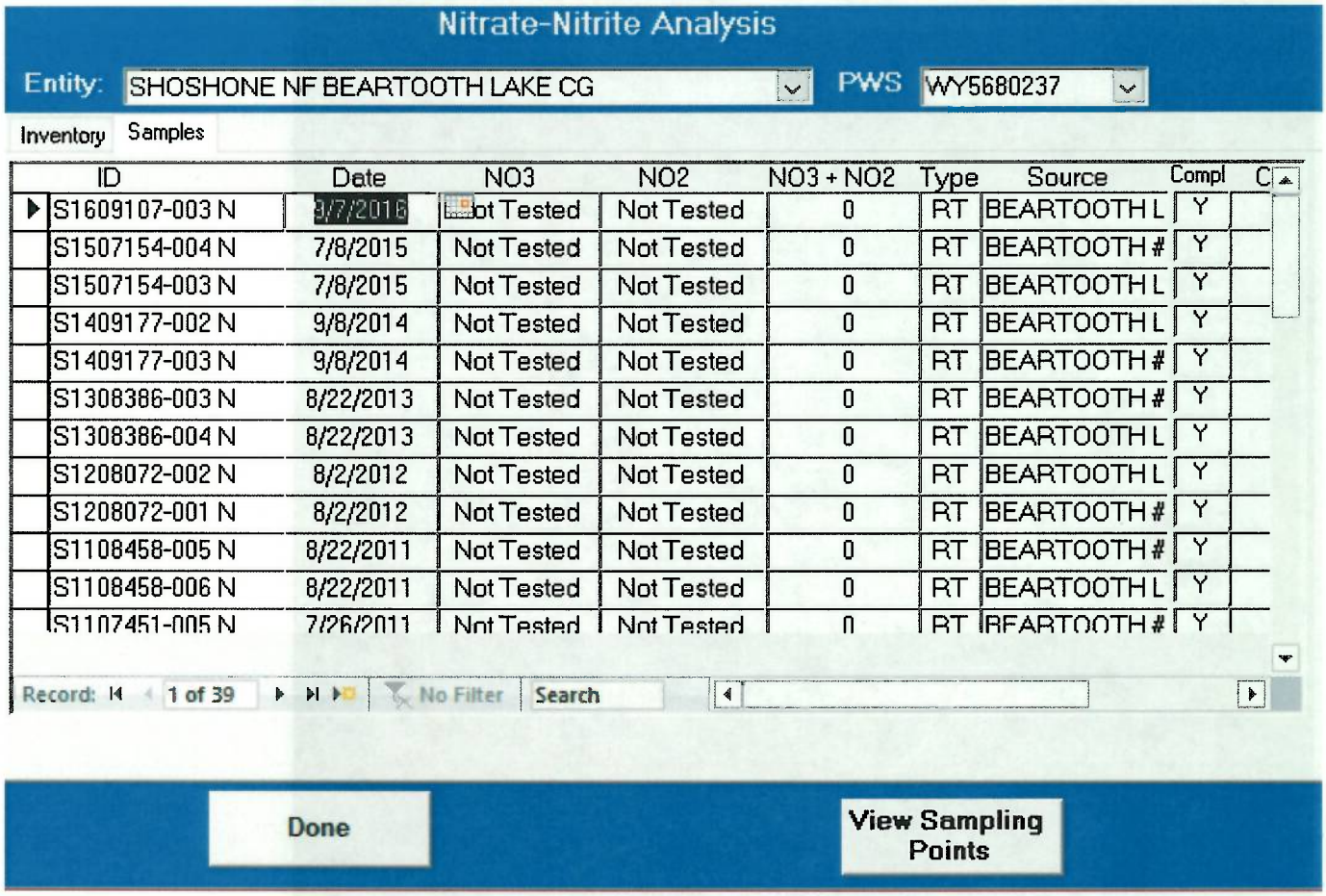
Agreed to by:_____

Date:_____

SCHEMATIC NOT TO SCALE
08/04/1999-A. Majewski
12/03/2007-C. Lamb
12/26/2013-D. Roberts

ADDITIONAL NOTES

ADDITIONAL NOTES



Nitrate-Nitrite Analysis

Entity: SHOSHONE NF BEARTOOTH LAKE CG PWS WY5680237

Inventory | Samples

ID	Date	NO3	NO2	NO3 + NO2	Type	Source	Compl	C
S1609107-003 N	9/7/2016	ot Tested	Not Tested	0	RT	BEARTOOTH L	Y	
S1507154-004 N	7/8/2015	Not Tested	Not Tested	0	RT	BEARTOOTH #	Y	
S1507154-003 N	7/8/2015	Not Tested	Not Tested	0	RT	BEARTOOTH L	Y	
S1409177-002 N	9/8/2014	Not Tested	Not Tested	0	RT	BEARTOOTH L	Y	
S1409177-003 N	9/8/2014	Not Tested	Not Tested	0	RT	BEARTOOTH #	Y	
S1308386-003 N	8/22/2013	Not Tested	Not Tested	0	RT	BEARTOOTH #	Y	
S1308386-004 N	8/22/2013	Not Tested	Not Tested	0	RT	BEARTOOTH L	Y	
S1208072-002 N	8/2/2012	Not Tested	Not Tested	0	RT	BEARTOOTH L	Y	
S1208072-001 N	8/2/2012	Not Tested	Not Tested	0	RT	BEARTOOTH #	Y	
S1108458-005 N	8/22/2011	Not Tested	Not Tested	0	RT	BEARTOOTH #	Y	
S1108458-006 N	8/22/2011	Not Tested	Not Tested	0	RT	BEARTOOTH L	Y	
S1107451-005 N	7/26/2011	Not Tested	Not Tested	0	RT	BEARTOOTH #	Y	

Record: 1 of 39 No Filter Search

Done View Sampling Points

Coliform Sample/Sample Summary List

Menu Items

Water System No.	Lab Sample No.	Collection Date/Mc	For Comp	Type	Sampling Poi	Rjctd Sa	TC	FC	EC	Intrfr	No. RT Neg.
WY5680237	S1707078-004	07/06/2017	Y	RT	DIST		A		A		
WY5680237	S2+09107-003	09/07/2016	Y	RT	DIST		A		A		
WY5680237	S1608102-002	08/03/2016	Y	RT	DIST		A		A		
WY5680237	S1607214-001	07/13/2016	Y	RT	DIST		A		A		
WY5680237	S1606605-001	06/29/2016	N	RT	DIST		A		A		
WY5680237	S1606605-002	06/29/2016	N	RT	DIST		A		A		
WY5680237	S1507154-004	07/08/2015	Y	RT	DIST		A		A		
WY5680237	S1507154-003	07/08/2015	Y	RT	DIST		A		A		
WY5680237	S1407353-004	07/17/2014	Y	RT	DIST		A		A		
WY5680237	S1407353-003	07/17/2014	Y	RT	DIST		A		A		
WY5680237	S1208072-002	08/02/2012	Y	RT	DIST		A		A		
WY5680237	S1208072-001	08/02/2012	Y	RT	DIST		A		A		
WY5680237	S1207084-002	07/05/2012	Y	RT	DIST		A		A		
WY5680237	S1207084-001	07/05/2012	Y	RT	DIST		A		A		
WY5680237	S1108458-006	08/22/2011	Y	RT	DIST		A		A		
WY5680237	S110458-005	08/22/2011	Y	RT	DIST		A		A		
WY5680237	S1107451-005	07/26/2011	Y	RT	DIST		A		A		
WY5680237	S1107451-004	07/26/2011	Y	RT	DIST		A		A		
WY5680237	S1007405-002	07/27/2010	Y	RT	DIST		A				
WY5680237	S1007405-001	07/27/2010	Y	RT	DIST		A				
WY5680237	9072562	07/14/2009	Y	RT	DIST		A				
WY5680237	9072561	07/14/2009	Y	RT	DIST		A				
WY5680237	604205	09/02/2008	Y	RT	DIST		A				
WY5680237	604204	09/02/2008	Y	RT	DIST		A				
WY5680237	603633	08/12/2008	Y	RT	DIST		A				
WY5680237	603632	08/12/2008	Y	RT	DIST		A				
WY5680237	603022	07/16/2008	Y	RT	DIST		A				
WY5680237	603021	07/16/2008	Y	RT	DIST		A				
WY5680237	602832	07/14/2008	Y	RT	DIST		A				
WY5680237	602831	07/14/2008	Y	RT	DIST		A				
WY5680237	564686	07/10/2007	Y	RT	DIST		A				
WY5680237	594685	07/10/2007	Y	RT	DIST		A				
WY5680237	594052	06/25/2007	Y	RT	DIST		A				
WY5680237	594051	06/25/2007	Y	RT	DIST		A				
WY5680237	593743	06/18/2007	Y	RT	DIST		A				
WY5680237	593742	06/18/2007	Y	RT	DIST		A				
WY5680237	587053	08/14/2006	Y	RT	DIST		A				

Number of rows resulting from the search criteria used: 82

Number of rows displayed: 82